Hubbell LX JENEsys
User's Guide

Building
Automation, Inc.

August 2008
Rev. 5 – First Edition

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(Revision 5 – First Edition: August 2008)

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The user manual has the following contents:

Section 1
Discusses getting started with the JENE

Section 2
Discusses using the JENE on a LX System and base configuration

Section 3
Details configuration of System Inputs such as Switch Stations, Motion Sensors, Photo Sensors, and Dry Contacts

Section 4
Details configuration of Relay Panels

Section 5
Details the extra configuration screens associated with the LX JENE configuration

Section 6
Integration information

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1 Getting Started

1.1 LX JENE

The LX JENE platform is developed around a protocol extraction model. The LX JENE is designed to communicate with the Hubbell Building Automation LX Series of Lighting control products and provide a user friendly configuration interface and the ability to communicate with 3rd party LonWorks and BACnet systems. Each LX JENE has the ability to discover all LX devices on the LX network and will create a set of configuration graphics for each device found. In addition the LX JENE has the ability to reside on any 3rd party LonWorks or BACnet network.

The LX JENE is designed with an ease of use in mind. With the push of a button the LX JENE discovers all LX devices on the network.

Please note!
The LX JENE must not be used for any other purpose than that for which it was designed. Authorized personnel only may perform installation and repair.

1.2 Connecting to the LX JENE

The following steps should be taken prior to connecting to the JENE:

Step 1 - Ensure the LX JENE is mounted and powered up.

Step 2 – Verify that all LX Devices are connected to the LX JENE's LON Port #1.

- **Note Important:** If the LX JENE has been specified to integrate with a 3rd party LonWorks system then there will be two LON cards on the LX JENE. LON Port #1 is the front LON port while LON Port #2 is accessible on the back of the LX JENE.

Step 3 – It is required that laptop computer or a PC is used to connect to the LX JENE. This will require that the connecting computer have the capability to run a web browser. It is also required that the computer employee's a Java Runtime Environment. If you don't have a JRE, install the JRE included on the installation CD or go the following link and selection the option that best fits your computer : http://java.com/en/download/manual.jsp

Table 1

IP Address	192.168.1.120
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.1

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In order to access the LX JENE for the first time you must set your IP Address on your laptop to match the network configuration of the LX JENE. The subsequent steps will guide you through this process:

Step 1 – Push the start button in the bottom left of your computer screen.

Step 2 – View your computers Network and Dialup Connections.

Step 3 – View the Network Connections on your laptop. Right click your local area connections and select properties.

Step 4 – Scroll down and select the Internet Protocol (TCP/IP) selection and click the properties button.

Step 5 – The Internet Protocol (TCP/IP) Properties window will pop up. If "Obtain an IP address automatically" is selected proceed to **Step 6.** If "Use the following IP address" is selected, proceed to **Step 7**.

Step 6 – Select the "Use the following IP address" radio button. In the IP address text box, type the following – 192.168.1.99. In the Subnet mask text box, type in the following – 255.255.255.0. Leave the default gateway text box empty. Your laptop is now configured to communicate with the LX JENE integration platform.

Step 7 – In order for these changes to take effect, you need to click OK on the TCP/IP Properties menu and then OK on the Local Area Connections Properties menu.

If you are having problems configuring your laptop, reference ***Figure 1.1 Laptop IP Configuration*** for a detail on what your screen should look like.

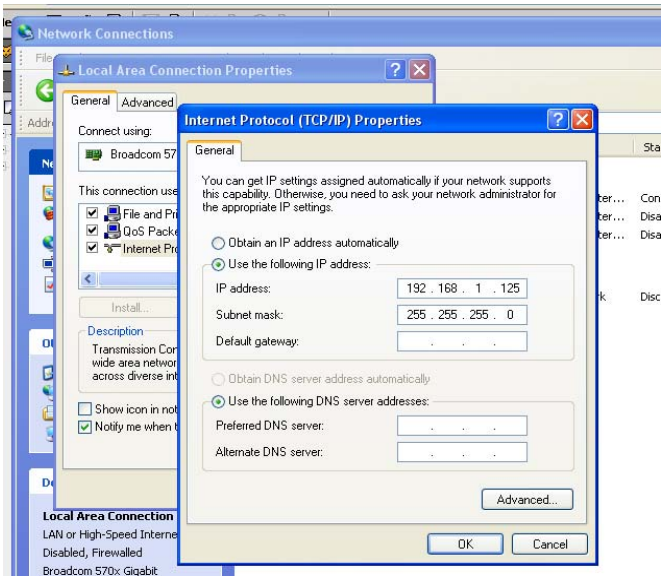

Figure 1 – Laptop IP Configuration

In order to access the LX JENE's internal user interface, you must first start up Internet Explorer on your laptop. Once Internet Explorer has started, type in the LX JENE's IP address (for example a LX JENE with serial number 8418 will have

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an IP address is 192.168.1.128) in the address bar, then press the Enter key on your laptop.

Note: Once you have finished working on the LX JENE, reset your computer back to Obtain an IP address automatically by selecting the radio button for this option and then clicking OK.

Note : If unable to connect to the LX JENE please ensure that your computer has a Java Runtime Environment (JRE) installed. If unsure install the JRE included on the installation CD or go the following link and selection the option that best fits your computer :
http://java.com/en/download/manual.jsp

The configuration login is:

- **Username: siteadmin**
- **Password: 0000 (Note: these are zeros)**

For a detail of what your screen should look like, reference ***Figure 1.2 Login Screen***.

There are 4 primary user types. See Section 5.1 for more information on setting up and managing user accounts.

hbaadmin: login has full access to all system functionality used for technical support and advanced commissioning settings.

sysadmin: short for system administrator, this is typically the commissioning agent or HBA representative.

siteadmin: short for site admistrator, this would normally be the local facilities manager responsible for overall operation of the system.

user: The system or site admistrator can setup password protected user accounts for employess to have limited access to the system. This user level has predefined access to only the programming section of the JENEsys. This level excludes access to configuration, integration, and other areas that are setup during commissioning.

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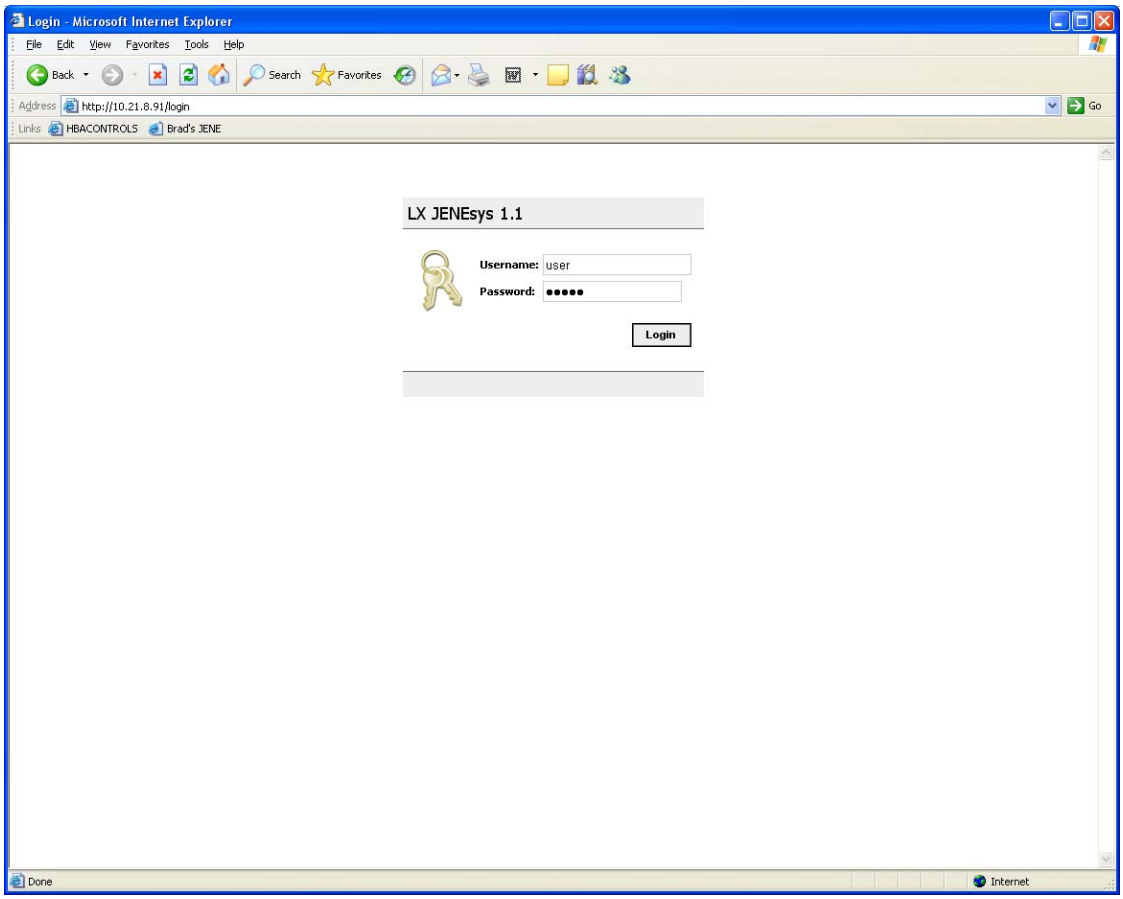

Figure 1.2 Login Screen

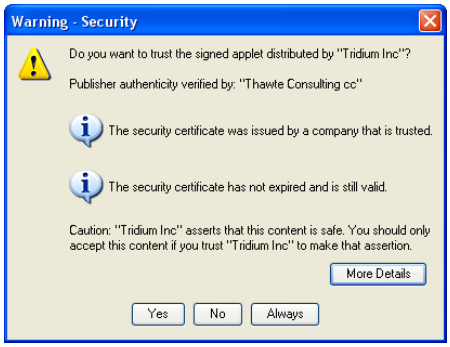
Warning - Security
Do you want to trust the signed applet distributed by "Tridium Inc"?
Publisher authenticity verified by: "Thawte Consulting cc"
The security certificate was issued by a company that is trusted.
The security certificate has not expired and is still valid.
Caution: "Tridium Inc" asserts that this content is safe. You should only accept this content if you trust "Tridium Inc" to make that assertion.
More Details
Yes
No
Always

Figure 1.2.1 Security Permssion

Upon loggin in, the JENE will begin to upload the JAVA Application to your laptop. You will see a progress indicator and be asked to verify permission to execute this process. Click on the YES button to start.

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2 Launching the LX JENE

2.1 Main Screen Layout and Navigation

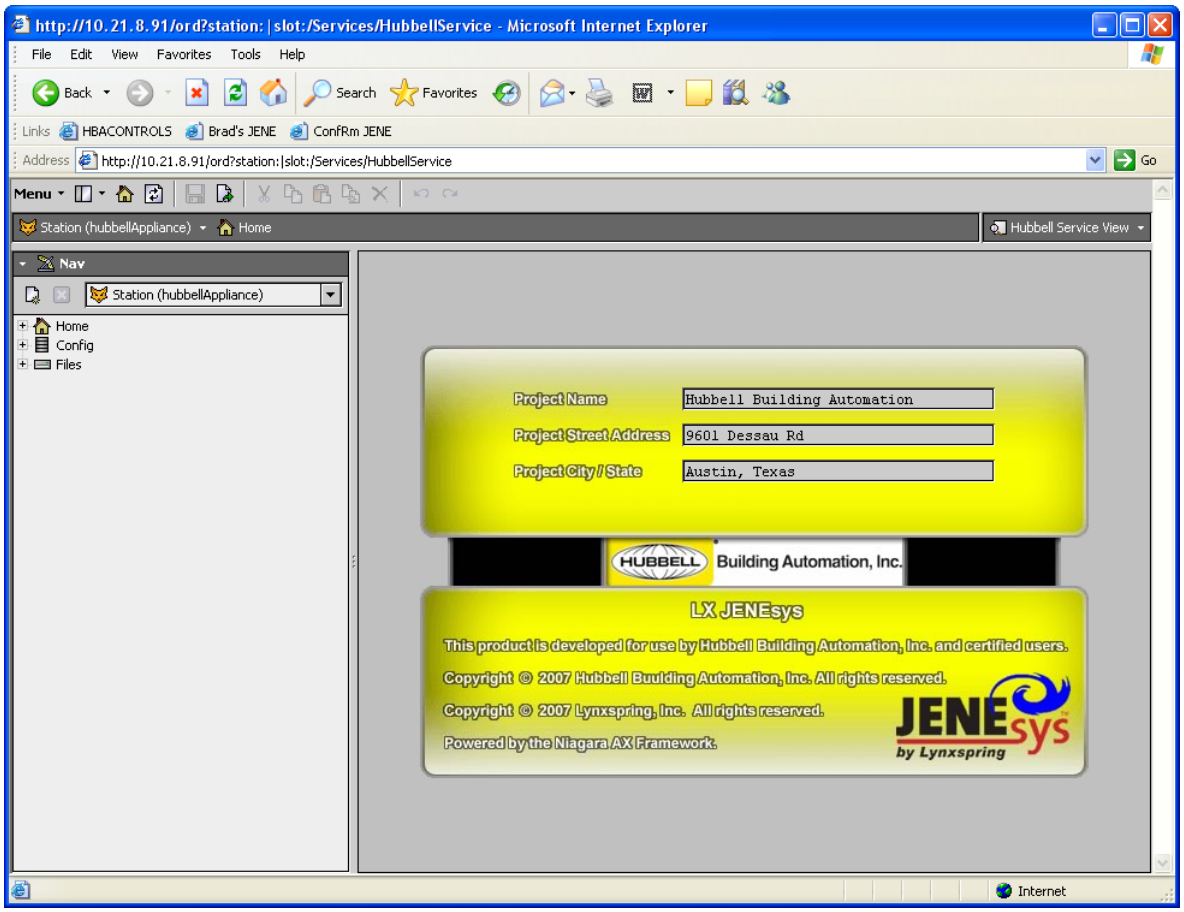

Figure 2.1 Main Navigation Screen

Figure 2.1 shows the main JENE Navigation screen within the Internet Explorer window. This screen will vary depending on the login permission of each user type (sysadmin, siteadmin, user, etc).

The top horizontal bar starting with the word "Menu" is not used in the JENEsys programming or configuration. Although some of the buttons are active, they are reserved for troubleshooting with HBA Tech support only.

The next dark grey horizontal bar (starting with the orange fox icon) is an alternative navigation aid with drop down menus and also illustrates your current view/position in the navigation tree.

The large grey vertical frame on the left is the primary navigation tree. Within that tree there are three sections.

a. The home icon (called Home or Hubbell appliance depending on the user permission) has the basic user password administration, the integration settings and the standard LX system level programming submenus.

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b. The Config file contains administrative level controls for user accounts, web and TCP/IP settings, system variables as well as a more detailed LX system- level programming tree.
c. A files folder that contains logging and system backup files.

2.1.1 Building the LX System For the First Time

Building the LX system in a LX JENE is a simple process. The initial use of the interface is to configure the LX Lighting Control System, while the second is to provide a means to configure the integration. The configuration of the LX Lighting System using the LX JENE is discussed throughout the remainder of this section.

Step 1 – Ensure all LX devices are connected to the LX LON trunk.

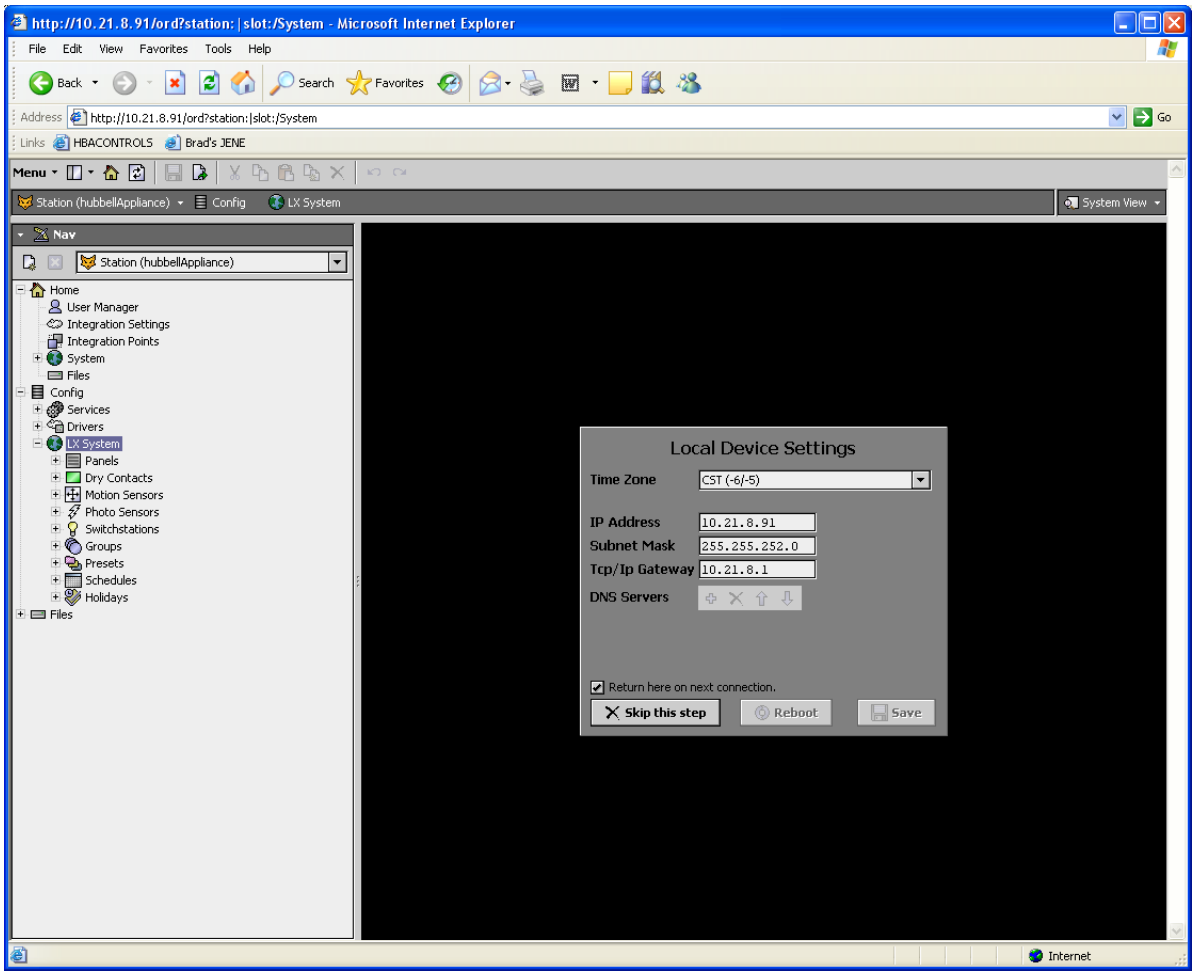

Figure 2.1.1a Step 2 of the System build process.

Step 2 – To continue to the Build System menu, press the "Skip this step" button. (Figure 2.1.1a)

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Note: Under the Config file, double click on the LX System Icon. This will bring up the Local Device Settings Menu. The setting here will generally not be changed, but are easily edited and saved from this window. If changes are made to these settings, the SAVE and the Reboot buttons must be pressed for them to take effect. **Note: Always make note of TCP/IP settings, as they are required to log back in after rebooting.**

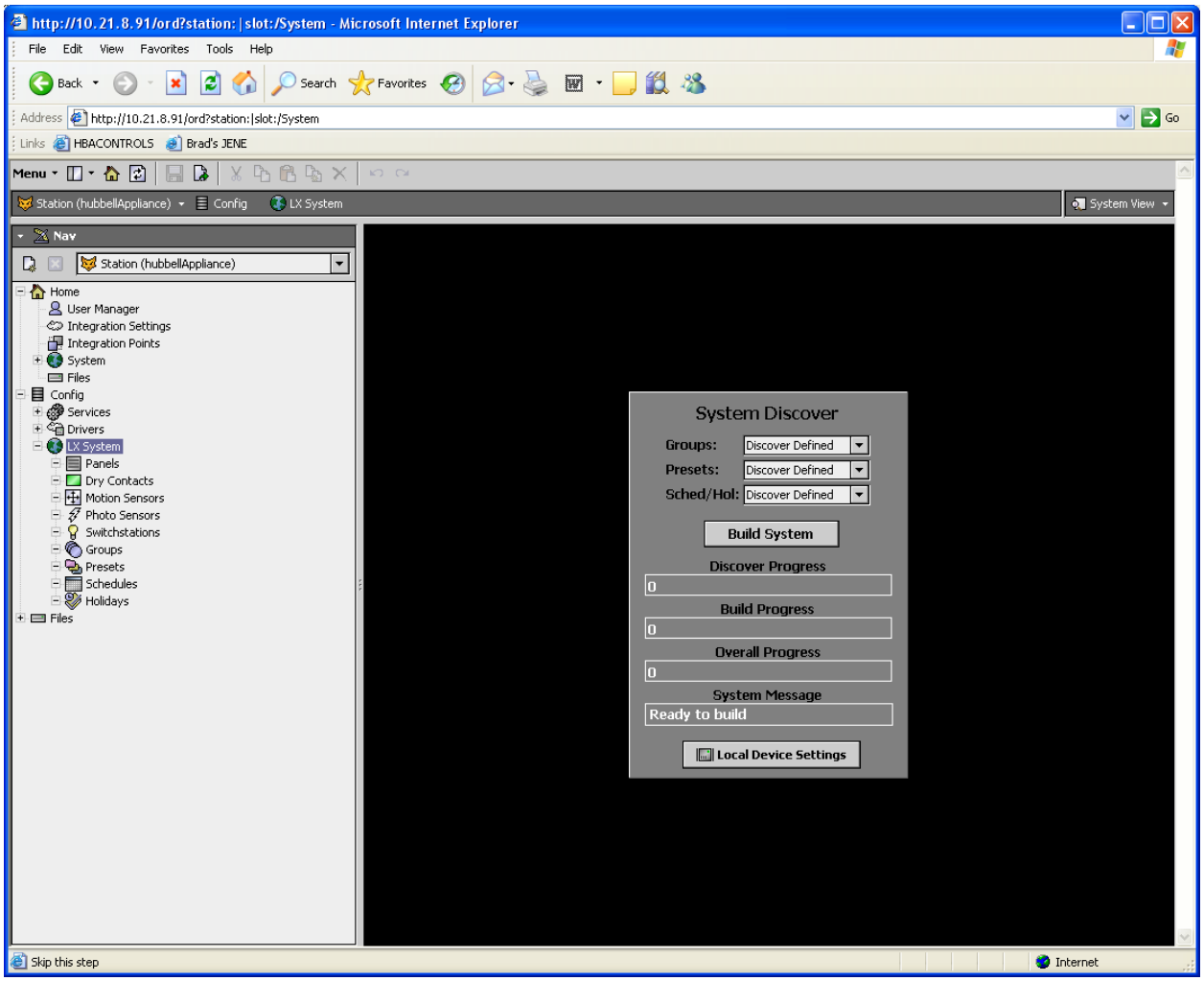

Figure 2.1.1b Step 3 of the System build process.

Step 3 – Press the "Build System" button. (Figure 2.1.1b)

NOTE: The LX panel holds empty slots for 99 Groups, Presets, Schedules and Holidays. There are three options in the System Discovery process for importing programming from the panel to the JENE. "Discover Defined" results in a faster discovery and only imports each program type until an undefined program is encountered. This is the recommended option for new systems and for systems with known programming. "Discover All99" options will import all 99 of each. This is usually only used for troubleshooting. Finally, "Discover None" can be used to only discover system hardware, omitting any programming.

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Once the "Build System" button has been pressed a chain of events are fired off in the LX JENE, they are as follows:

1. The Discover Progress bar will go from a value of 0% to 100%. While in the Discover phase the LX JENE is performing a device discover on the LX LON network.
2. Once all devices have been discovered the next phase is the actually building of the LX System in the LX JENE's database. This build process can take several minutes. During this phase the Build Progress will go from a value of 0% to 100%.
3. The Overall Progess bar will go from a value of 0% to 100% and increments during each phase of the System creation process. Once this value reaches 100% the following has occurred in the LX JENE
    a. Graphical Interfaces for the following Categories/Devices have been created:
        i. Existing System Settings configuration
        ii. System Settings
        iii. Holidays
        iv. Schedules
        v. Groups
        vi. Presets
        vii. System Inputs
            1. Switch Stations
            2. Motion Sensors
            3. Photo Cells
            4. Dry Contacts
        viii. Relay Panels
        ix. TCP/IP Settings
        x. Integration Builder
        xi. Version Information
    b. LX LON devices are added to the LX Network.
    c. All LX networks commissioning and binding is completed automatically.

NOTE: Once the LX system has been built in the JENE controller, clicking on the "Skip this Step" button from the Local Device Settings page will bring up the global LX systems settings page. If the JENE needs to rebuild the LX system because new hardware was added or removed, follow the instructions in the following section 2.1.2.

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2.1.2 Re-Building the LX System

Follow these instructions to rebuild the system if hardware has been removed or added.

Step 1 – From the config section, right click on the LX System icon. Select Actions and RESET. This will clear the JENEsys of all LX device and programming information. (see Figure 2.2.1)

Step 2 – From the same right click menu, click on LEARN. This will initiate the System Build process. This process runs in the background and will take several minutes. You can also double click the System Icon under the Home folder and follow the steps from Section 2.1.1 for building the system for the first time. This will allow you to see the build progress. Following the build, the JENE will be rebooted. The reboot takes another 2 to 3 minutes.

Step 3 – To complete the process, log out of the JENE by closing the Internet Explorer application (not just the window, but the program itself). Restart Explorer and log back into the JENEsys.

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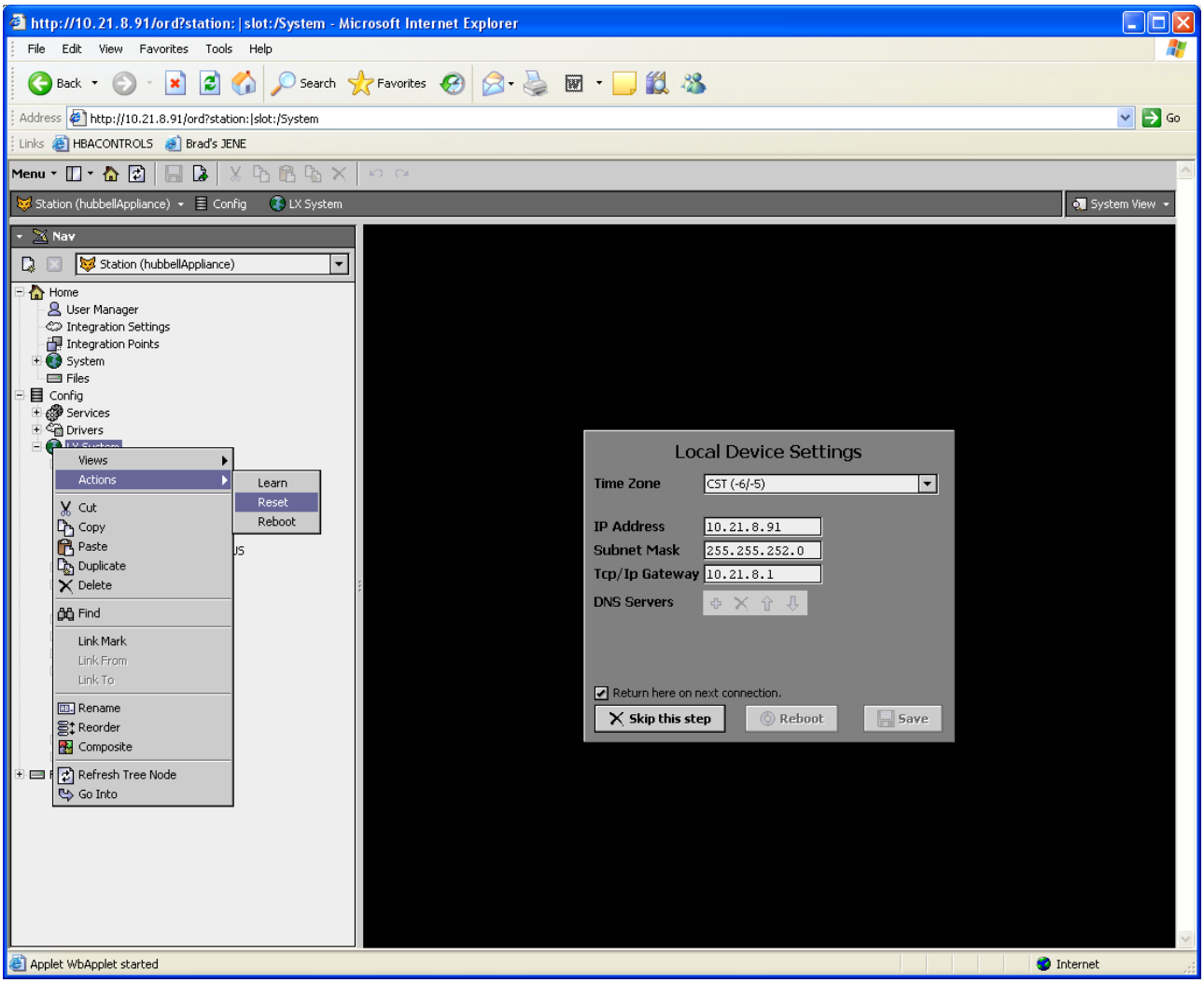

Figure 2.1.2 Step 1 of the re-build process.

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2.3.1 System Settings – System Time & Date

The System Date & Time tab is designed to provide a simple interface for setting the LX System Date & Time information (reference ***Figure 2.4 LX JENE System Date & Time***). Below you will find a stepped process for configuration the LX System Date & Time.

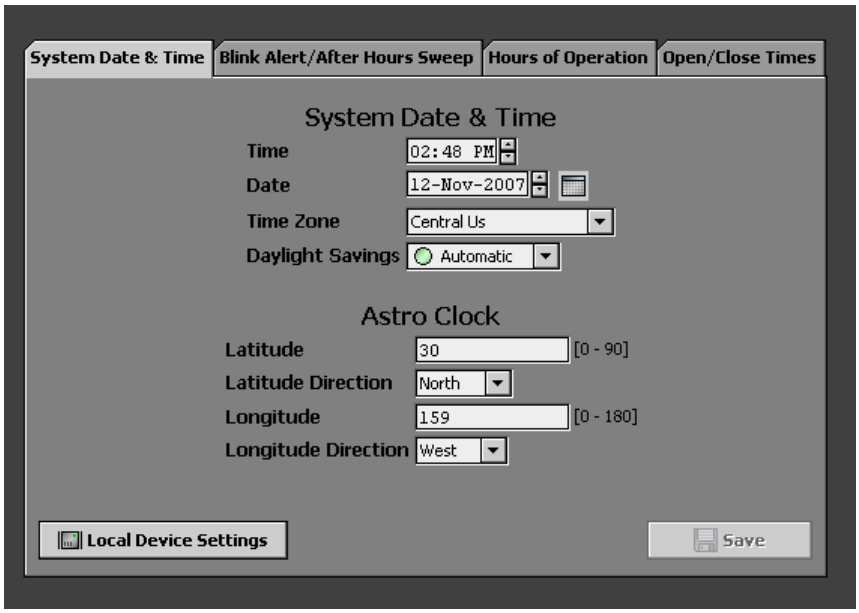

Figure 2.4 LX JENE System Date & Time

Step 1 – Double click on the System folder under the home icon or the LX system folder under the Confid icon in the navigation tree. The local device settings menu appears, and click on the "Skip this step" button. The system settings menu as in Figure 2.4 will appear.

Figure 2.6 Set Time & Date

Figure 2.7 Calendar Pop Up

Step 2 – Review the existing settings for the Astro clock (reference ***Figure 2.8 Astro Clock Settings***). If the current settings are not correct then enter in the new values.

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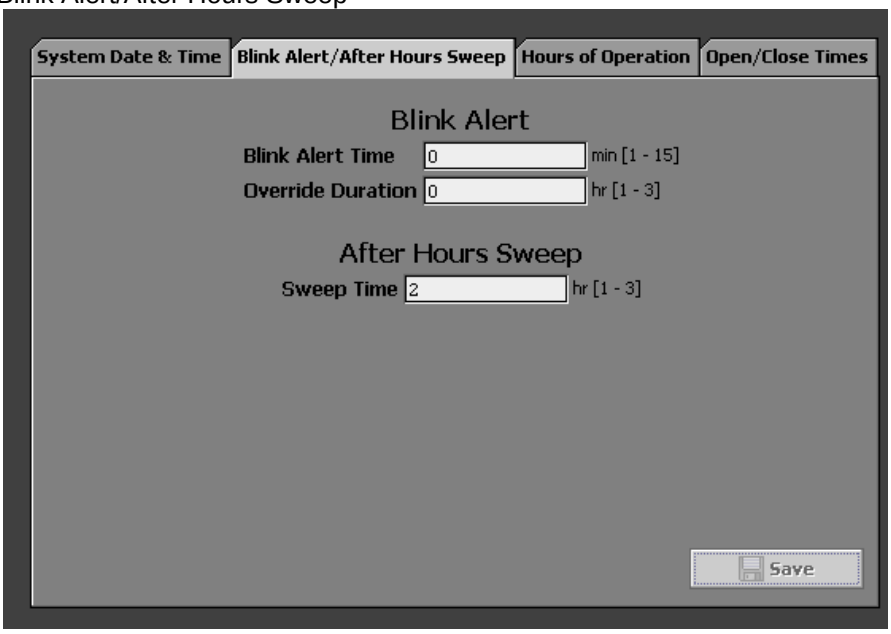
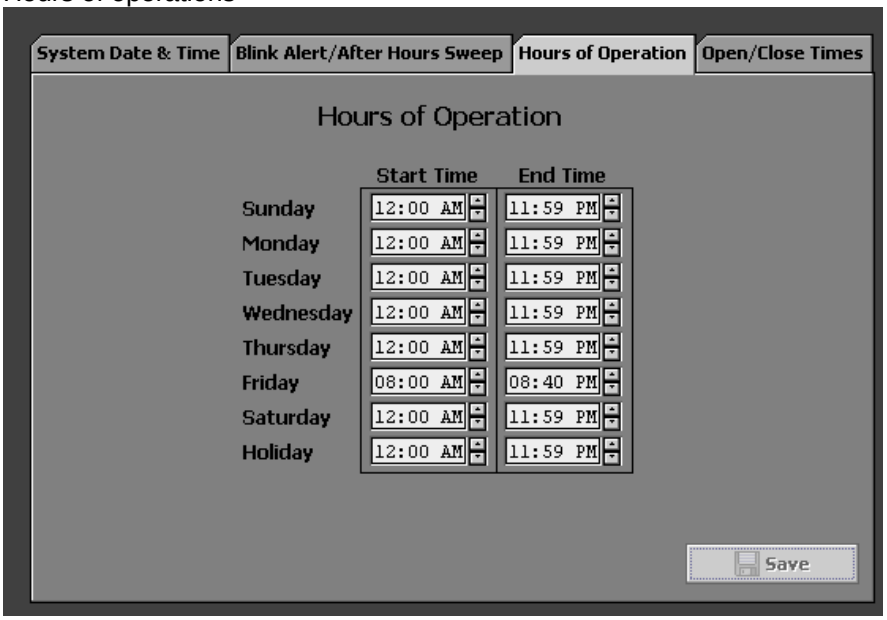
Figure 2.8 Astro Clock Settings

Step 3 – Continue through the other tabs

Blink Alert/After Hours Sweep



Hours of operations



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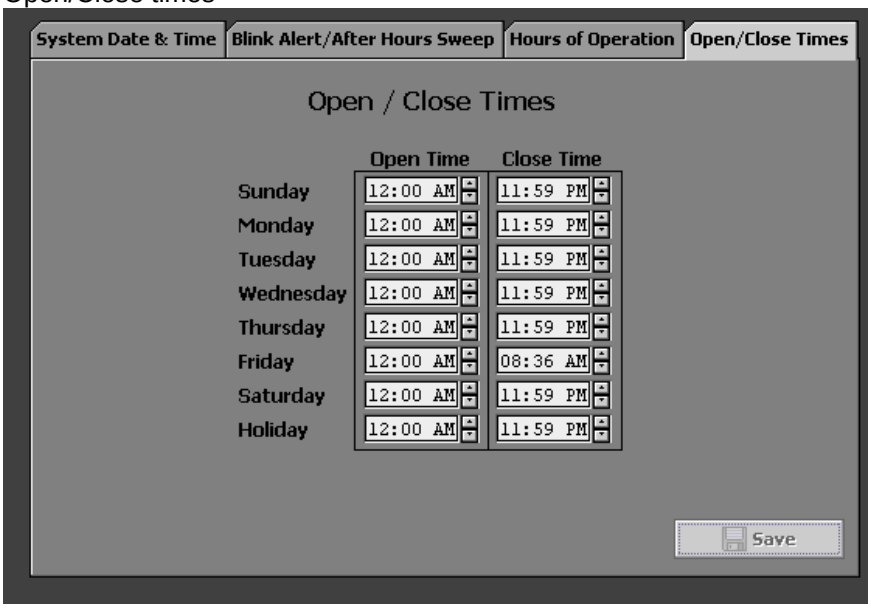
Open/Close times



Step 4 – Once all settings have been entered in press the "Save" button to store these settings. Save only needs to be pressed once to save changes on any of these tabs.

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2.4 Creating Holidays

The "Holidays" portion of the LX Interface is designed to allow for the global configuration of holidays in the LX Lighting System. Holidays can be added to the LX JENE as well as modified (reference section **2.5 Editing Holidays**). Creation of a new holiday in the LX JENE is covered below (reference ***Figure 2.17 Creating a Holiday***).

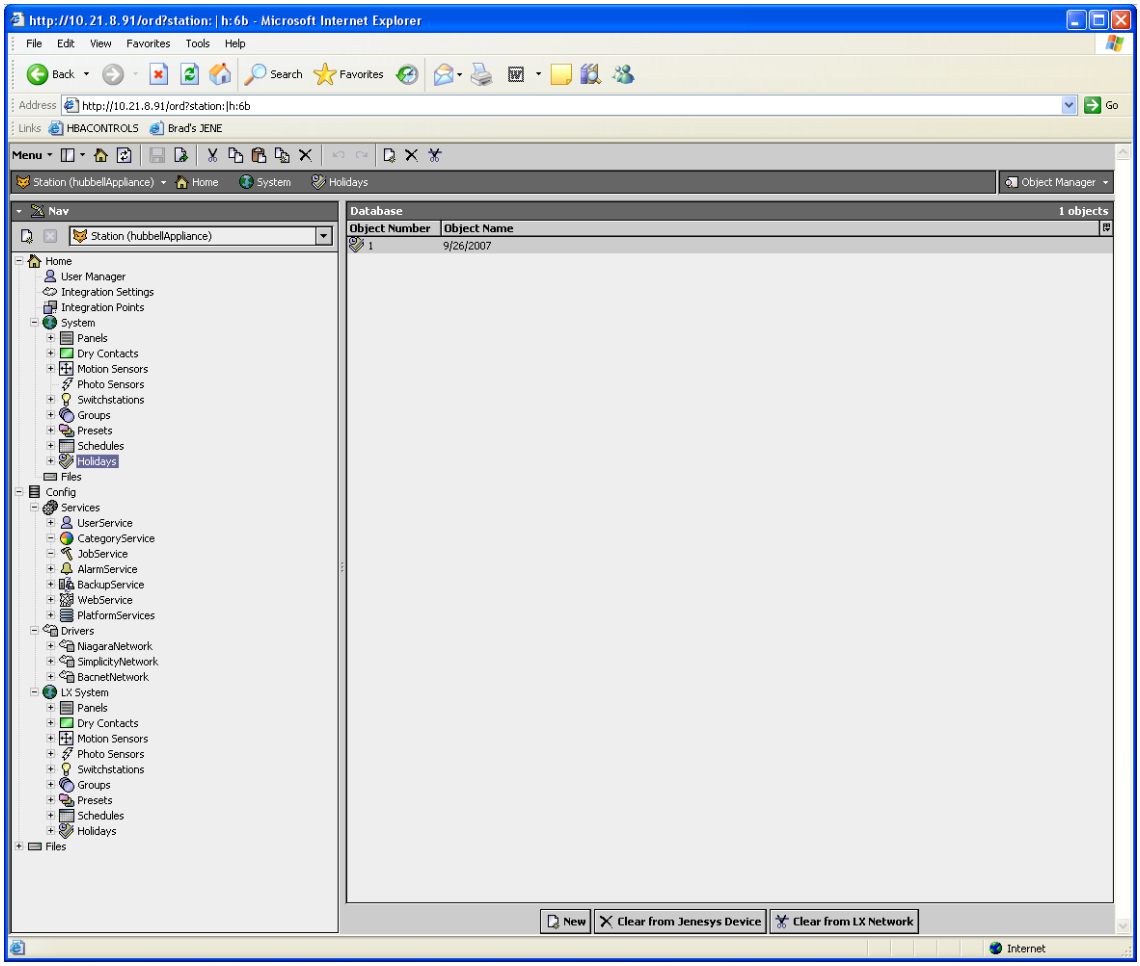

Figure 2.17 Creating a Holiday

Step 1 – Double Click the Holidays Icon in the navigation tree. There are 3 buttons on the bottom of the right hand side frame.

New: This will open a dialog box to create a new holiday date.
Clear from Jenesys Device: Will delete the holiday from the JENEsys navigation menu, but not from the LX system.
Clear from LX Network: Will delete the holiday from the LX network.

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2.5 Editing Holidays

Editing a Holiday that exists in the LX JENE database is accomplished by selecting the desired Holiday from the Navigation tree. Holidays are named based upon the Holiday date selected when it is created. Editing an existing holiday in the LX JENE is covered below (reference ***Figure 2.19 Editing a Holiday***).

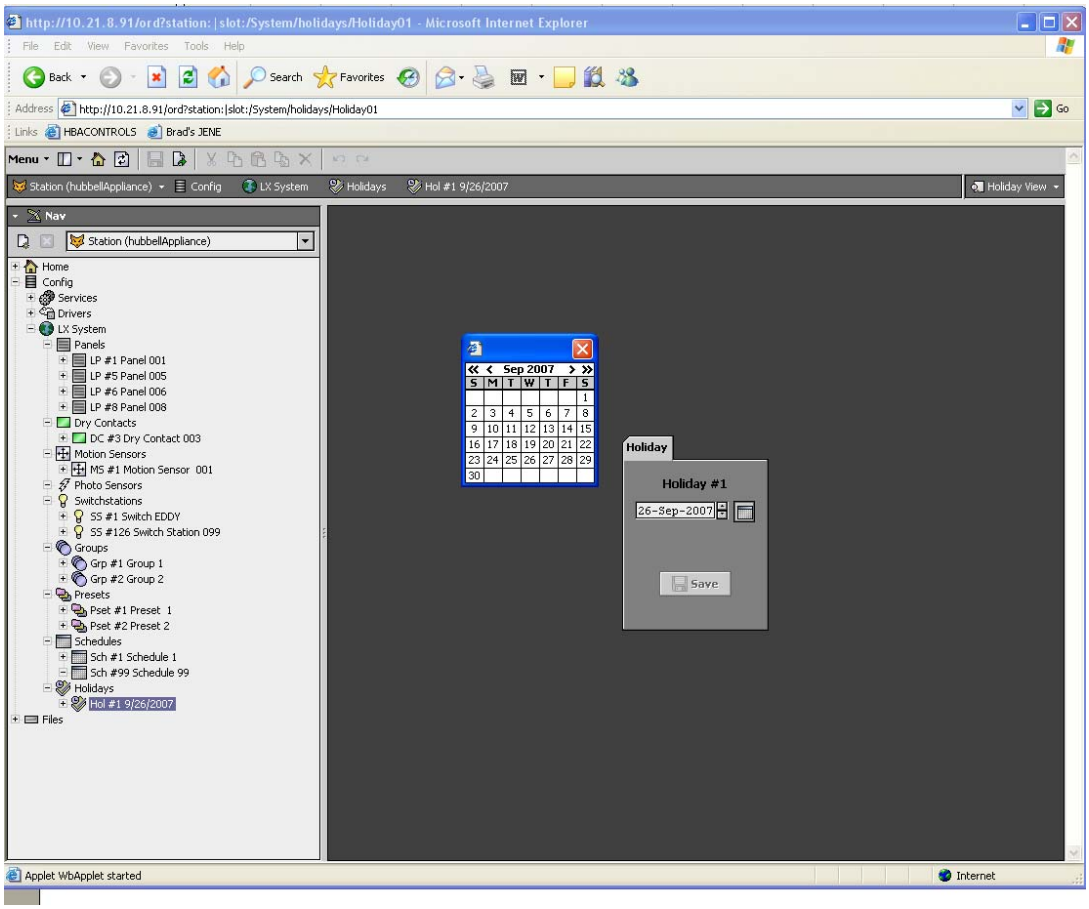

Figure 2.19 Editing a Holiday

Step 1 – Expand the Holidays icon in the navigation tree, then double click on the desired holiday to edit.

Step 2 – Once the day has been edited, press the "Save" button to store these settings.

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2.6 Creating Schedules

The "Schedules" portion of the LX Interface is designed to allow for the global configuration of schedules in the LX Lighting System. Schedules can be added to the LX JENE as well as modified (reference section **2.7 Configuring Schedules**). When a new schedule is created it is marked in the LX JENE for configuration. It is necessary to configure a schedule for proper system operation after it has been created. Creation of a new schedule in the LX JENE is covered below (reference ***Figure 2.22 Creating a Schedule***).

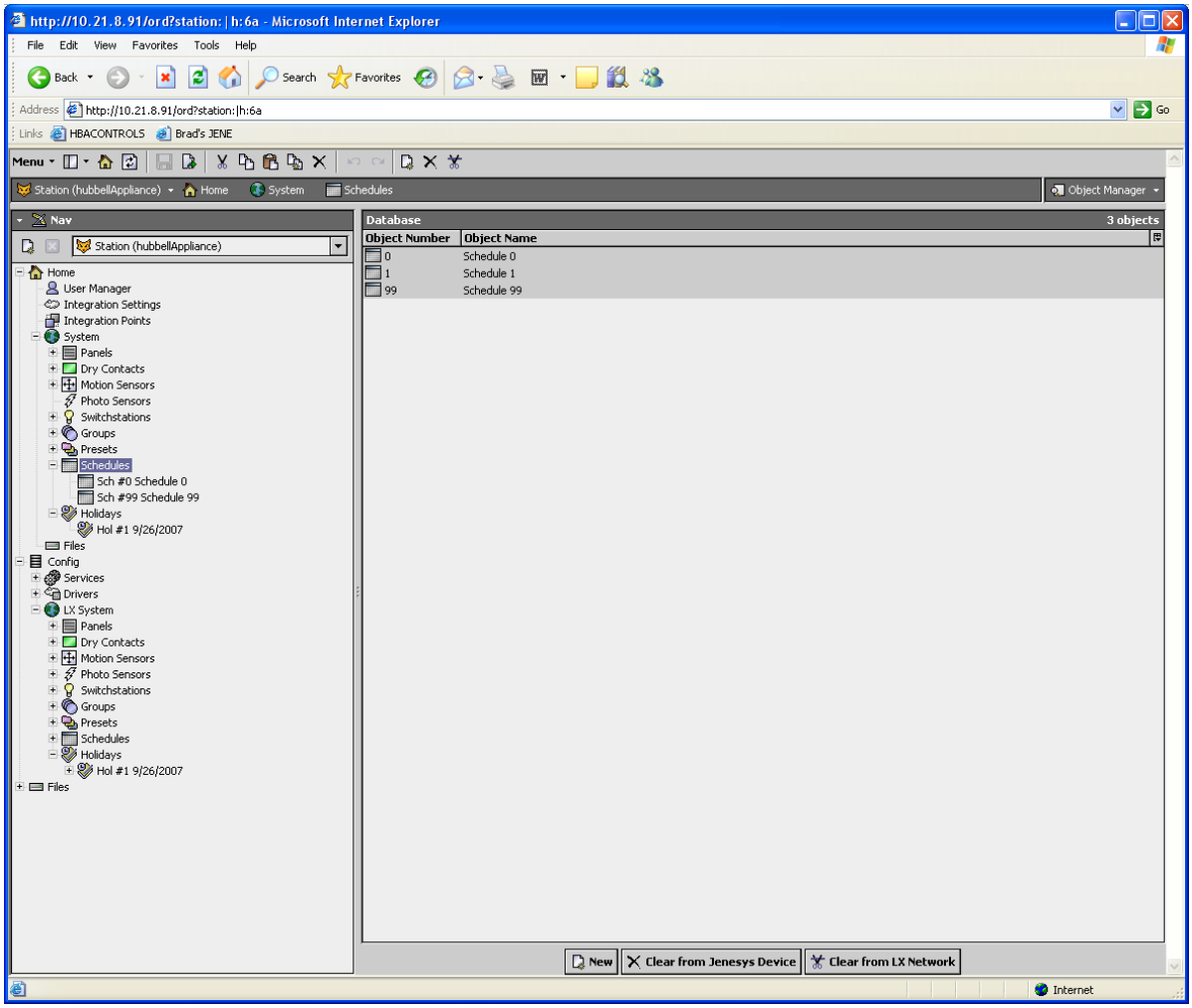

Figure 2.22 Creating a Schedule

Step 1 – Double click on the Schedules icon in the Navigation tree.

Step 2 – Click NEW on the bottom of the right hand side frame.

Step 3 – A dialog will open to choose a name for the new schedule. Type in a name and select OK.

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2.7 Configuring Schedules

Configuring a Schedule that exists in the LX JENE database is accomplished by double clicking the desired Schedule from the Navigation tree. Schedules are named based upon the unique name entered when it is created. Configuring an existing schedule in the LX JENE is covered below (reference ***Figure 2.23 Configuring a Schedule***).

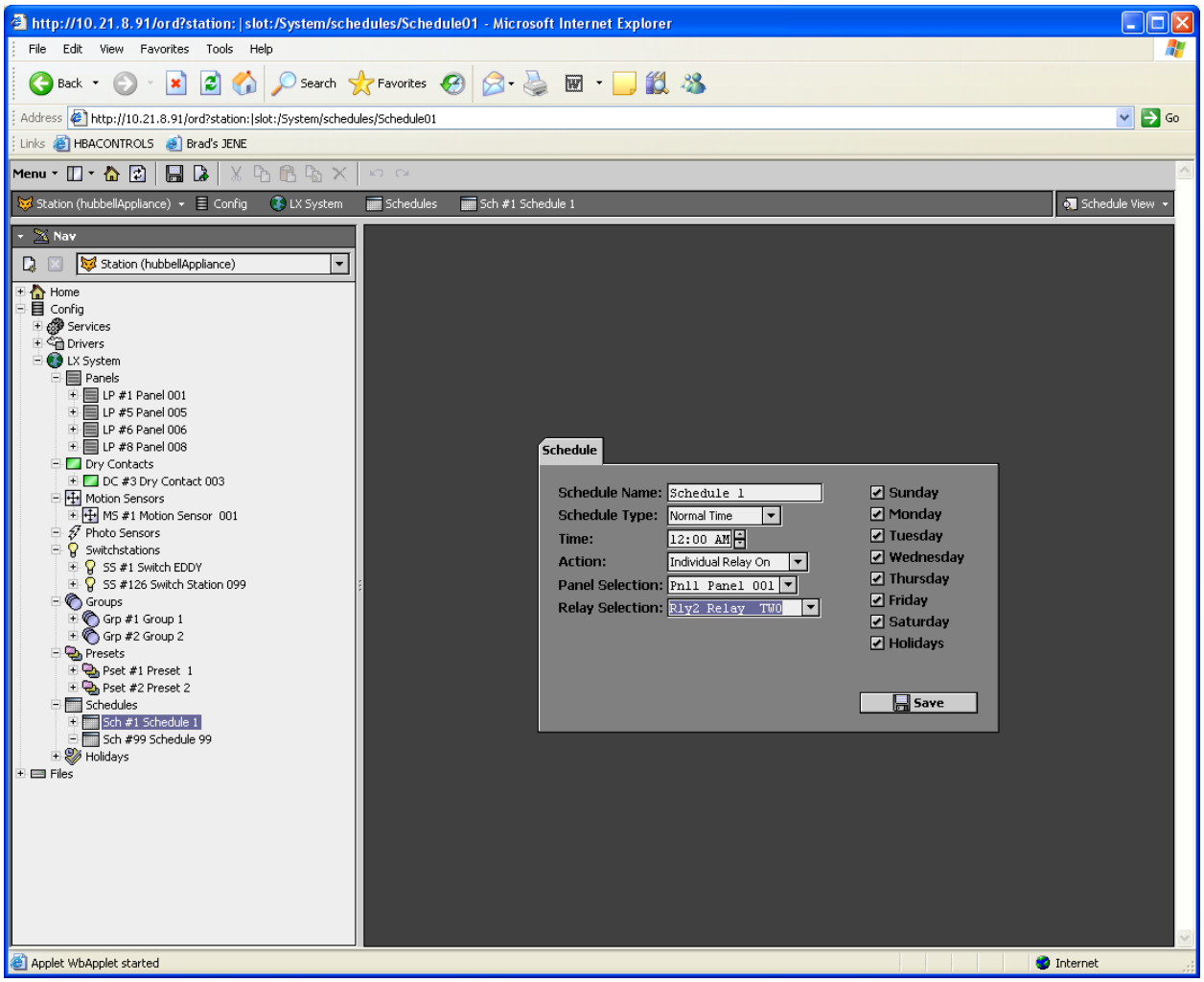

Figure 2.23 Configuring a Schedule

Step 1 – If desired you can change the name of the Schedule by typing a new name in the Schedule Name text box.

Step 2 – Select the Schedule Type from the drop down (reference ***Figure 2.24 Select Normal Time***).

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Figure 2.24 Select Schedule Type

Step 3 – Configure the schedule Time in the edit box.

Step 4 – Select the Schedule Action from the drop down (reference ***Figure 2.25 Select Schedule Action***).

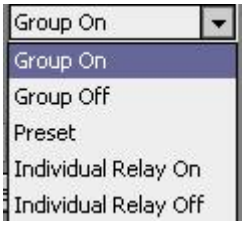

Figure 2.25 Select Schedule Action

Step 5 – Select the Select the appropriate group, preset, or relay based upon the selected action (reference ***Figure 2.27 Sample Selection***).

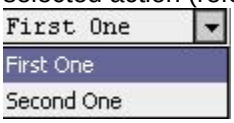

Figure 2.27 Sample Selection

Step 6 – Once all settings have been entered in press the "Save" button to store these settings.

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2.8 Creating Groups

The "Groups" portion of the LX Interface is designed to allow for the global configuration of groups in the LX Lighting System. Groups can be added to the LX JENE as well as modified (reference section **2.9 Configuring Groups**). When a new group is created it is marked in the LX JENE for configuration. It is necessary to configure a group for proper system operation after it has been created. Creation of a new group in the LX JENE is covered below (reference ***Figure 2.29 Creating a Group***).

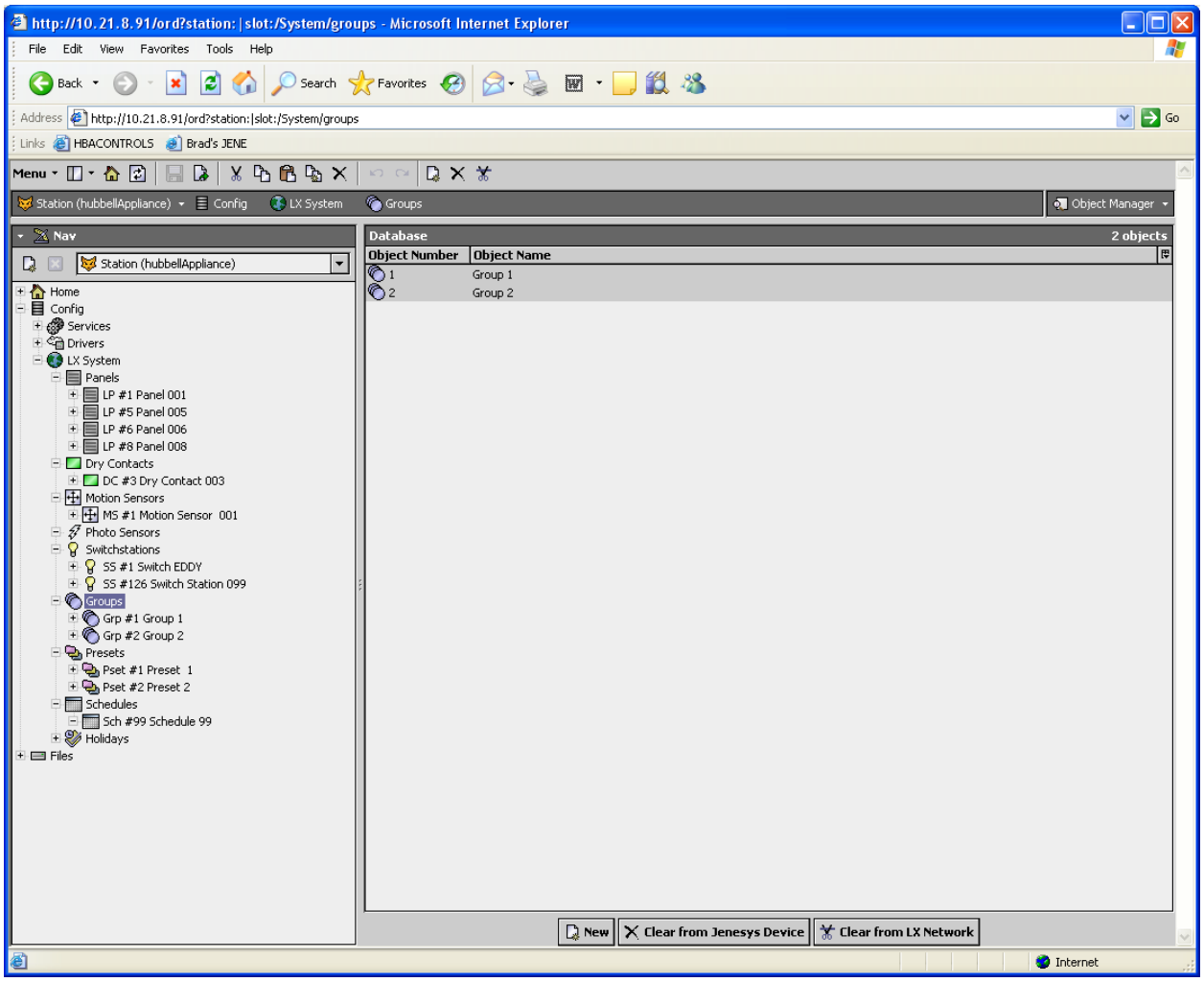

Figure 2.29 Creating a Group

Step 1 – Double click on the Groups icon in the Navigation tree.

Step 2 – Click NEW on the bottom of the right hand side frame.

Step 3 – A dialog will open to choose a name for the new Group. Type in a name and select OK.

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2.9 Configuring Groups

Configuring a Group that exists in the LX JENE database is accomplished by double clicking the desired Group from the Navigation tree. Groups are named based upon the unique name entered when it is created pre cursored by the word Group. Configuring an existing group in the LX JENE is covered below (reference ***Figure 2.30 Configuring a Group***).

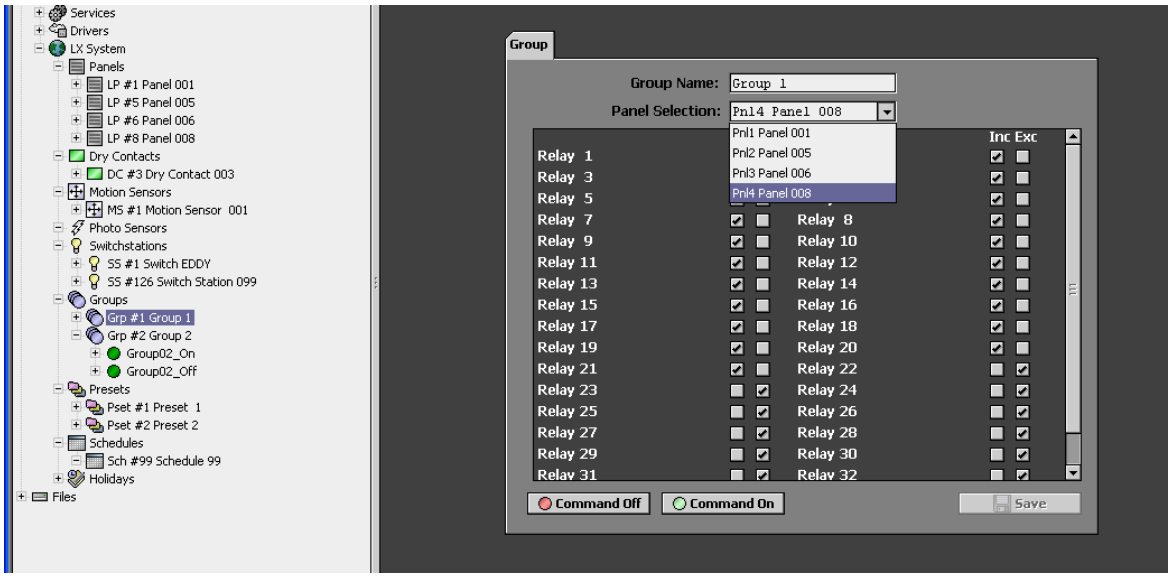

Figure 2.30 Configuring a Group

Step 1 – If desired you can change the name of the Group by typing a new name in the Group Name text box.

Step 2 – Select the Panel to work on by using the "Panel Selection" dropdown.

Step 3 – Select the relays included and excluded in the group for the selected panel.

Step 4 – Once all settings have been entered in press the "Save" button to store these settings.

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2.10 Creating Presets

The "Presets" portion of the LX Interface is designed to allow for the global configuration of presets in the LX Lighting System. Presets can be added to the LX JENE as well as modified (reference section **2.11 Configuring Presets**). When a new preset is created it is marked in the LX JENE for configuration. It is necessary to configure a preset for proper system operation after it has been created. Creation of a new preset in the LX JENE is covered below.

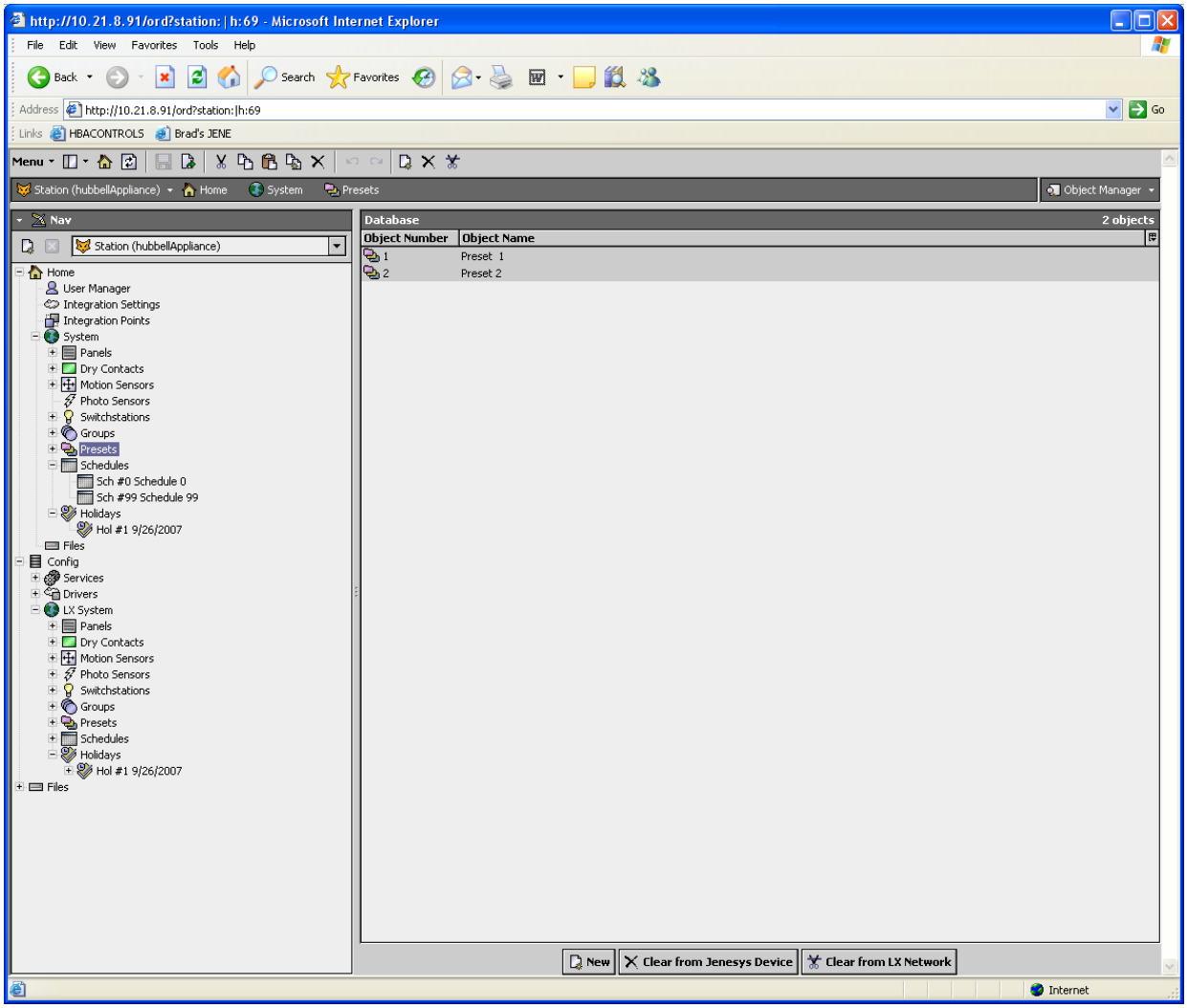

Figure 2.33 Creating a Preset

Step 1 – Double click on the Presets icon in the Navigation tree.

Step 2 – Click NEW on the bottom of the right hand side frame.

Step 3 – A dialog will open to choose a name for the new Preset. Type in a name and select OK.

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2.11 Configuring Presets

Configuring a Preset that exists in the LX JENE database is accomplished by selecting the desired Preset from the Navigation tree. Presets are named based upon the unique name entered when it is created pre cursored by the word Preset. Configuring an existing preset in the LX JENE is covered below (reference ***Figure 2.34 Configuring a Preset***).

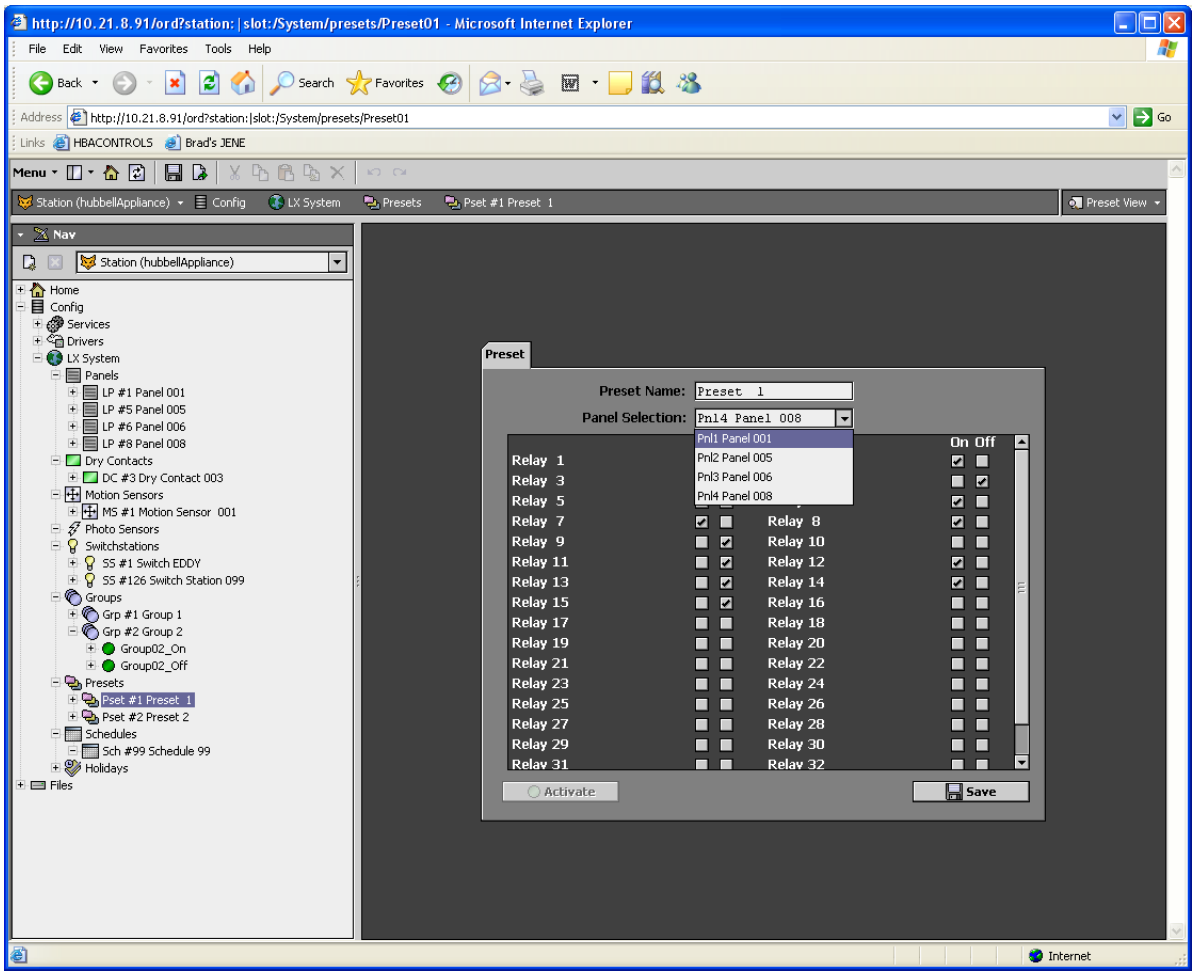

Figure 2.34 Configuring a Preset

Step 1 – If desired you can change the name of the Preset by typing a new name in the Preset Name text box.

Step 2 – Select the Panel to work on by using the "Panel Selection" dropdown. (

Step #3 – Select the relays on and off in the preset for the selected panel. **Note if neither ON nor OFF are selected then the relay is excluded from the selected preset**.

Step #4 – Once all settings have been entered in press the "Save" button to store these settings.

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3 System Inputs

3.1 LX System – Main Navigation

The System Inputs include the following device categories.

1. Panels
2. Dry Contacts
3. Motion Sensors
4. Photo Cells
5. Switch Stations

Each category contains all of the devices found on the LX network that are of the category type. Devices are named based upon the Node ID, which is set by the user settable dial switches. The user-settable dial switches determine each devices subnet/node combination. Each end device contains 3 address dial (0-9) switches allowing a number from 000-999 to be selected. The value 000 is reserved to place a device in LonMark mode. **Note in order for the LX JENE to operate correctly devices must not be placed in the LonMark mode.**

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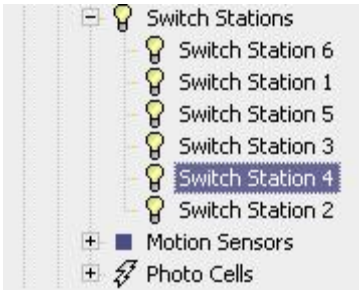
3.2 Switch Stations



The "Switch Stations" portion of the LX Interface is designed to allow for the individual configuration of each Switch Station in the LX Lighting System. There will be a two tabbed view that is displayed for each Switch Station. You can navigate between the subjects by clicking the corresponding tab. Configuration topics include:

1. Switch Configuration – This tab is where the LX Switch Station inputs are configured.
2. Switch Active and Inactive Times – This tab is where the LX Switch Station active and inactive times are set.

Switch Stations can have 1-6 switch inputs and each input is configured individually.

3.2.1 Switch Stations – Switch Configuration

The Switch Configurtaion tab is designed to provide a simple interface for setting up the designated LX Switch Station's configuration. Below you will find a stepped process for configuration of the LX Switch Station inputs. For example purposes a Switch Station with 5 Switch Inputs is used. By default Switch Input number one is selected (reference ***Figure 3.8 Configuring Switch Input***).

NOTE: The switch status can be changed in real-time by clicking on the virtual button with the red or green LED status light.

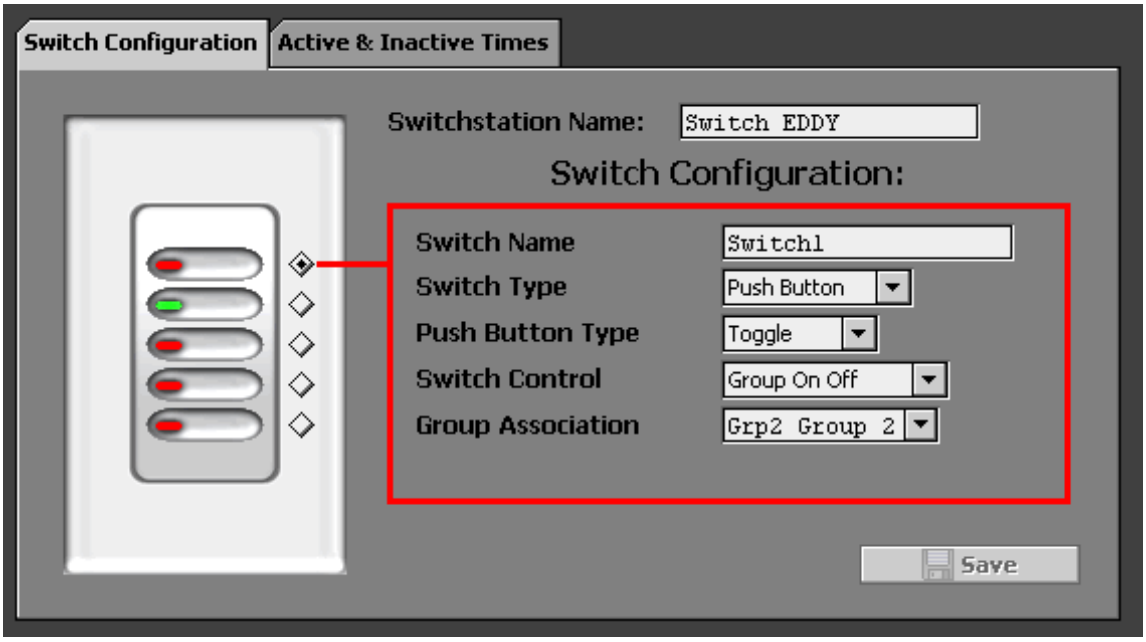


Figure 3.8 Congifuring Switch Input

Step 1 – Review the current LX Switch Station Name. If desired the Switch Station Name can be changed at any time by typing the new name into the text box.

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Step 2 – Each Button is selected for configuration by clicking on the associated diamond radio button in the Switch Configuration view (reference ***Figure 3.10 Switch Input Selection***) has a name associated with it. Review the current Switch Name and change it by typing a new name in the text box.

Step 3 – Each Button has a switch type associated with it. The switch type that is selected will determine switch configuration options. You can change the Switch Type by selecting the appropriate type from the drop down (reference ***Figure 3.11 Switch Type Selection***).

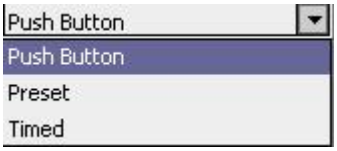

Figure 3.11 Switch Type Selection

Step 4 – if a Push Button Switch is selected then continue with this step. If an input of type Preset is selected jump to **Step 8**, if an input of type Timed is selected jump to **Step 10**. The next configuration step is to select the Push Button Type from the drop down (reference ***Figure 3.12 Push Button Type Selection***).

1. Toggle – This option fires that associated action on and off.
2. On Only – This option only performs the associated on action.
3. Off Only – This option only performs the associated off action.

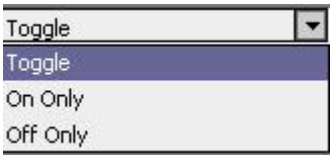

Figure 3.12 Push Button Type Selection

Step 5 – Once the Push Button Type is selected, the associated Switch Control must be selected from the drop down (reference ***Figure 3.13 Switch Control Selection***).

1. Group On Off – This option sets the Switch Input association with a Group.
2. Map To Individual Relay – This option sets the Switch Input association with an individual relay in the selected panel.

Figure 3.13 Switch Control Selection

Step 6 – Once the Switch Control is selected, the associated action must be selected from the drop down provided (reference ***Figure 3.14 Group Selection*** or ***Figure 3.15 Panel Selection*** and ***Figure 3.16 Relay Selection***).

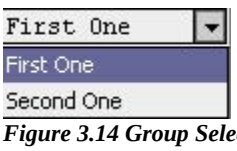

Figure 3.14 Group Selection

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Figure 3.15 Panel Selection

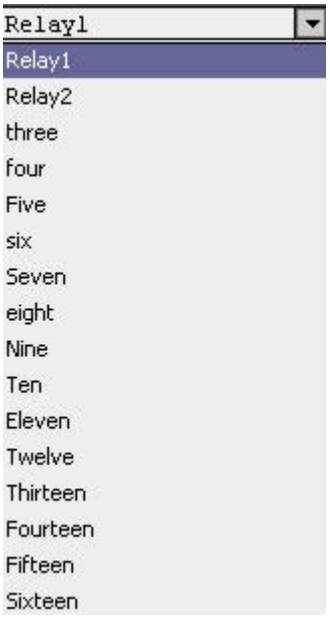

Figure 3.16 Relay Selection

Step 7 – Once all settings have been entered in press the "Save" button to store these settings.

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Step 8 – The following configuration is for Switch Inputs that are set to a Switch Type of Preset (reference ***Figure 3.17 Preset Type Configuration***). The only parameter that needs to be set is the Preset Association.

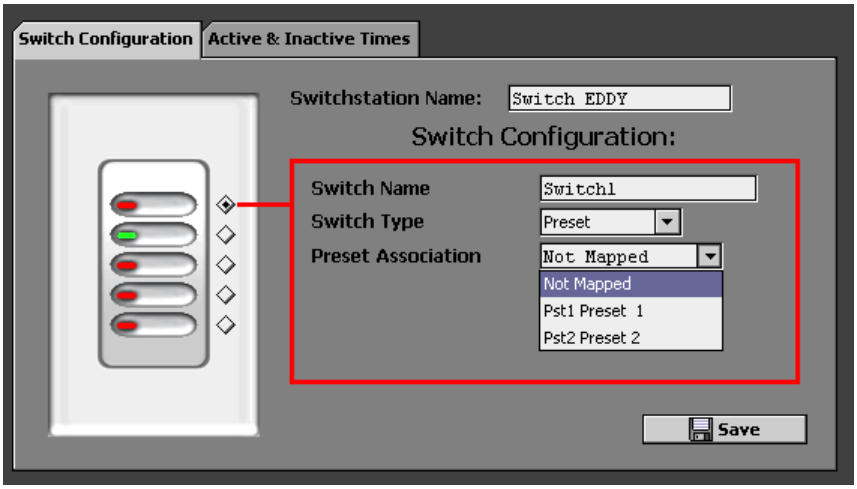

Figure 3.17 Preset Type Configuration

Step 9 – Once all settings have been entered in press the "Save" button to store these settings.

Step 10 – The following configuration is for Switch Inputs that are set to a Switch Type of Timed (reference ***Figure 3.18 TimedType Configuration***). The unique parameter that is different from the Push Button type is the Time Switch Active property. The value is a number and is entered into the text box provided.

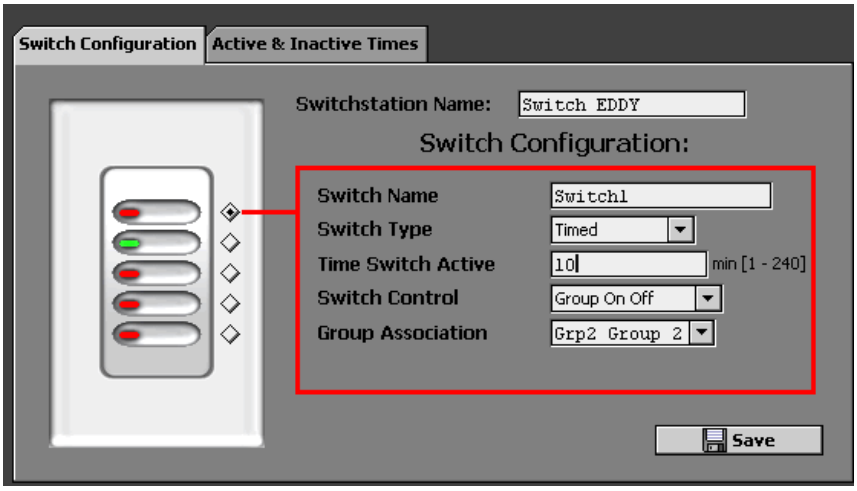

Figure 3.17 Preset Type Configuration

Step 11 – Once all settings have been entered in press the "Save" button to store these settings.

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3.2.2 Switch Stations – Active & Inactive Times

The Active & Inactive Times tab is designed to provide a simple interface for setting up the designated LX Switch Station's Active & Inactive Times. Below you will find a stepped process for configuration the LX Switch Station Active & Inactive Times (reference ***Figure 3.18 Switch Active & Inactive Times***).

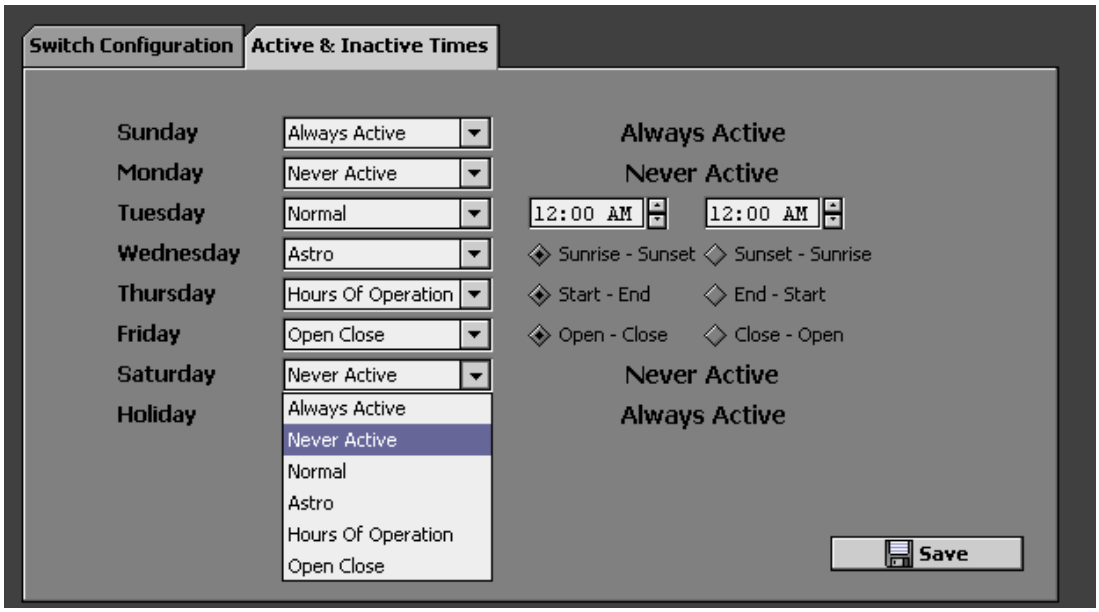

Figure 3.18 Switch Active & Inactive Times

Step 1 – Review the current LX Switch Station Active & Inactive Settings. For each day change the action associated with each day (reference ***Figure 3.19 Switch Active & Inactive Actions***). Always Active – This option sets the Motion Sensor to always active.

1. Never Active – This option sets the Motion Sensor to never active. If chosen the Motion Sensor will not be active.
2. Normal – This option sets the Motion Sensor to use the Normal Times which are set with the Start and Stop times.
3. Astro – This option sets the Motion Sensor to use the Astro clock settings for activation.
4. Hours of Operation – This option sets the Motion Sensor to use the Hours of Operation settings for activation.
5. Open Close – This option sets the Motion Sensor to use the Open and Close settings for activation.

Figure 3.19 Switch Active & Inactive Actions

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Step 2 – Once all settings have been entered in press the "Save" button to store these settings.

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3.3 Motion Sensors

The "Motion Sensors" portion of the LX Interface is designed to allow for the individual configuration of each Motion Sensor in the LX Lighting System. There will be a three tabbed view that is displayed for each Motion Sensor. You can navigate between the subjects by clicking the corresponding tab. Configuration topics include:

1. Motion Sensor Configuration – This tab is where the LX Motion Sensor settings are configured.
2. Motion Sensor On/Off Configuration – This tab is where the LX Motion Sensors on and off action is setup.
3. Motion Sensor Active and Inactive Times – This tab is were the LX Motion Sensor active and inactive times are set..

3.3.1 Motion Sensor – Sensor Configuration

The Sensor Configuration tab is designed to provide a simple interface for setting up the designated LX Motion Sensor's configuration. Below you will find a stepped process for configuration of the LX Motion Sensor (reference ***Figure 3.23 Configuring Motion Sensor***).

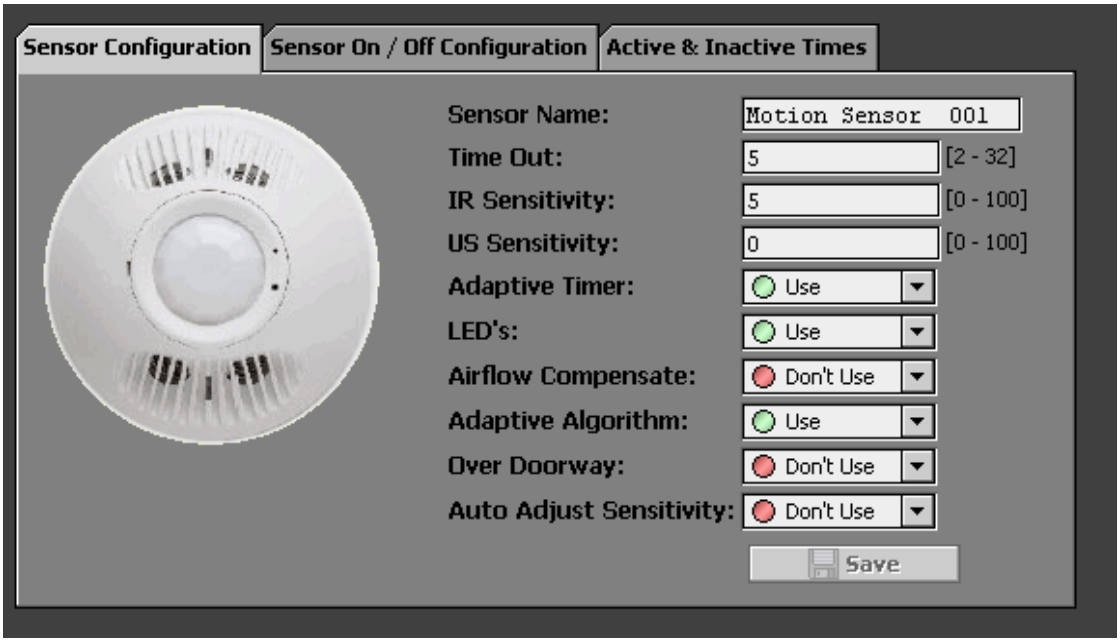

Figure 3.23 Congifuring Motion Sensor

Step 1 – Review the current LX Motion Sensor Name. If desired the Motion Sensor Name can be changed at any time by typing the new name into the text box.

Step 2 – Review the current LX Motion Sensor Time Settings as shown. If desired the settings can be changed at any time by typing the new value into the text box or using the drop down menu.

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Step 3 – Once all settings have been entered in press the "Save" button to store these settings.

3.3.2 Motion Sensor – Sensor On / Off Configuration

The Sensor On / Off Configurtaion tab is designed to provide a simple interface for setting up the designated LX Motion Sensor's on and off action. Below you will find a stepped process for configuration of the LX Motion Sensor (reference ***Figure 3.26 Configuring Motion Sensor On/Off***).

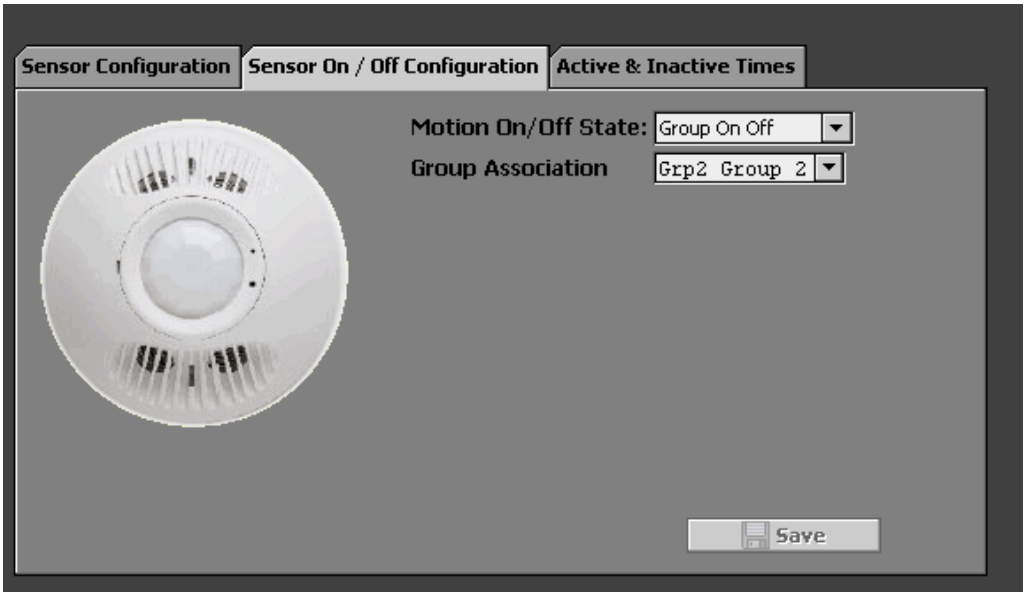

Figure 3.23 Congifuring Motion Sensor On/Off

Step 1 – Review the current Motion On/Off State and change if desired from the drop down.

1. Group On Off – This option sets the Switch Input association with a Group.
2. Map To Individual Relay – This option sets the Switch Input association with an individual relay in the selected panel.

Step 2 – Once the Motion On/Off State is selected the associated action must be selected from the drop down provided

Step #3 – Once all settings have been entered in press the "Save" button to store these settings.

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3.3.3 Motion Sensor – Active / Inactive Times

The Active & Inactive Times tab is designed to provide a simple interface for setting up the designated LX Motion Sensor's Active & Inactive Times.

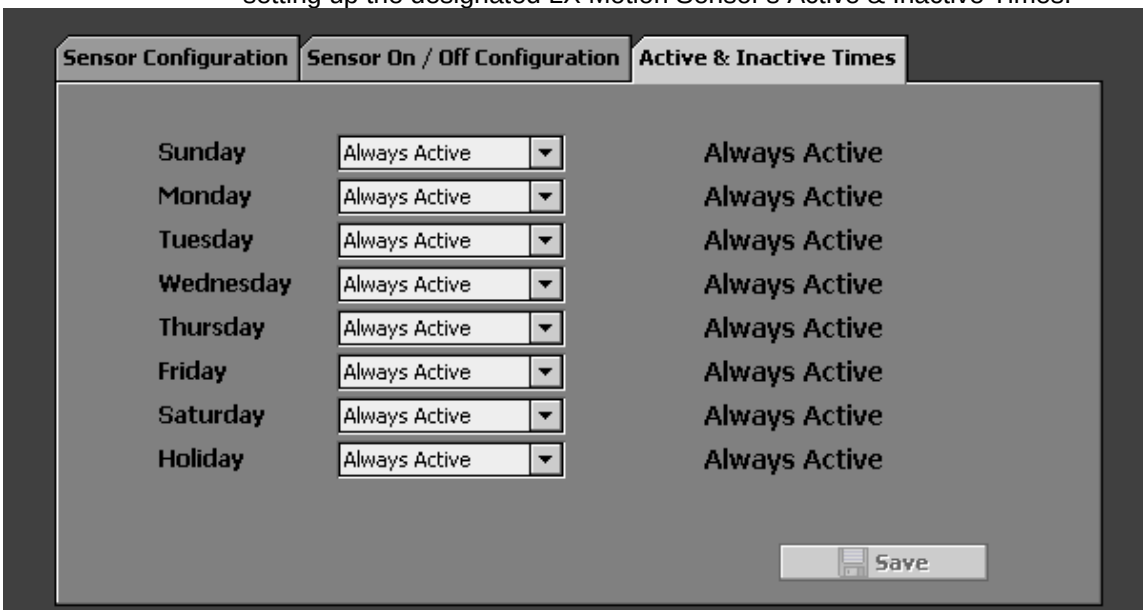

Figure 3.31 Motion Sensor Active & Inactive Times

Step 1 – Review the current LX Motion Sensor Active & Inactive Settings. For a detailed description of the Active and Inactive time settings, see the similar section for Switch Stations in Section 3.2.2.

Step 2 – Once all settings have been entered in press the "Save" button to store these settings.

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3.4 Photo Sensors

The "Photo Sensors" portion of the LX Interface is designed to allow for the individual configuration of each Photo Cell in the LX Lighting System. There will be a two tabbed view that is displayed for each Photo Cell. You can navigate between the subjects by clicking the corresponding tab. Configuration topics include:

1. Photo Cell Configuration – This tab is where the LX Photo Cell switches are configured.
2. Photo Cell Active and Inactive Times – This tab is where the LX Photo Cell active and inactive times are set.
3.

Photo Cells can have 1-6 switch inputs and each input is configured individually.

3.4.1 Photo Sensors – Switch Configuration

The Switch Configurtaion tab is designed to provide a simple interface for setting up the designated LX Photo Cell's configuration. Below you will find a stepped process for configuration of the LX Photo Cells inputs. By default Switch Input number one is selected (reference ***Figure 3.35 Configuring Photo Cell Inputs***).

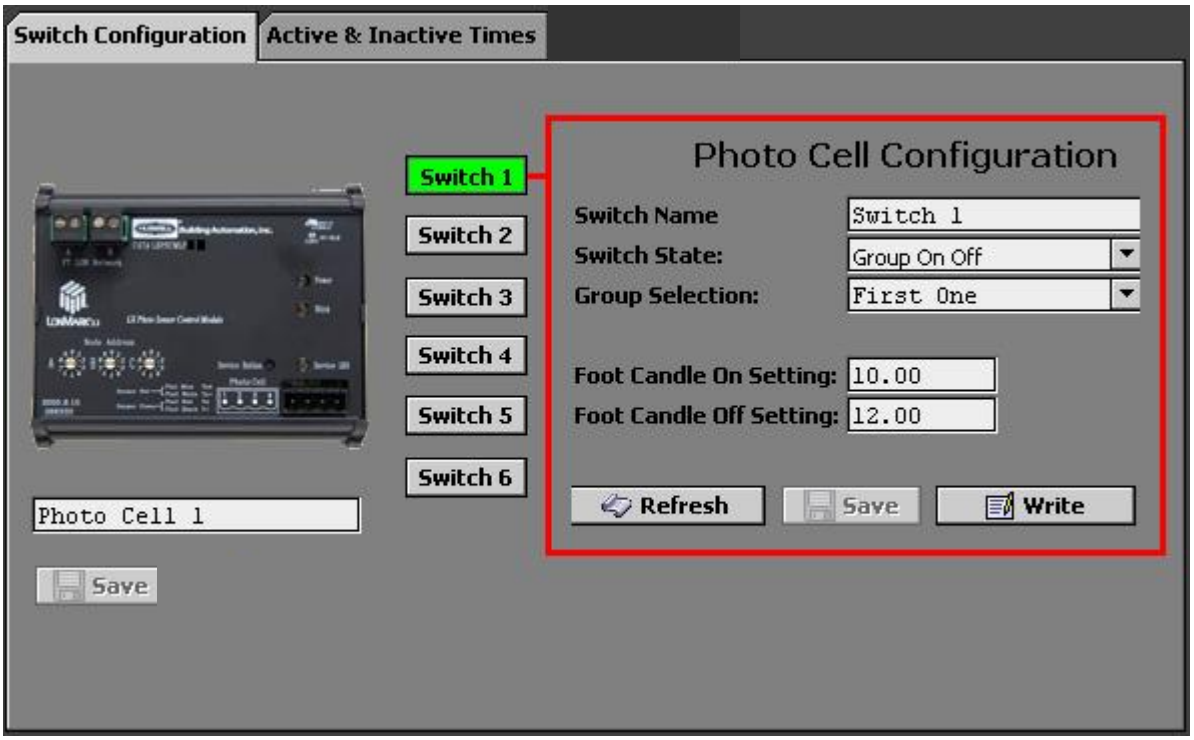

Figure 3.35 Congifuring Photo Cell Inputs

Step 1 – Review the current LX Photo Cell Name (reference ***Figure 3.36 Photo Cell Name***). If desired the Photo Cell Name can be changed at any time by typing the new name into the text box.

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Step 2 – Each Input is selected for configuration by clicking on the associated Switch button. Review the current Switch Name and change it by typing a new name in the text box.

Step 3 – Once the Switch is selected the associated Switch State must be selected from the drop down (reference ***Figure 3.37 Photo Cell Switch State Selection***).

1. Group On Off – This option sets the Switch Input association with a Group.
2. Map To Individual Relay – This option sets the Switch Input association with an individual relay in the selected panel.

Figure 3.37 Photo Cell Switch State Selection

Step 4 – Once the Switch Control is selected the associated action must be selected from the drop down provided (reference ***Figure 3.38 Group Selection*** or ***Figure 3.39 Panel Selection*** and ***Figure 3.40 Relay Selection***).

Figure 3.38 Group Selection

Figure 3.39 Panel Selection

Figure 3.40 Relay Selection

Step 4 – Review the current LX Photo Cell Foot Candle On Setting. If desired the Foot Candle On Setting can be changed at any time by typing the new value into the text box.

Step 5 – Review the current LX Photo Cell Foot Candle Off Setting. If desired the Foot Candle Off Setting can be changed at any time by typing the new value into the text box.

Step 6 – Once all settings have been entered in press the "Save" button to store these settings.

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3.3.2 Photo Sensors – Active & Inactive Times

The Active & Inactive Times tab is designed to provide a simple interface for setting up the designated LX Photo Cell's Active & Inactive Times. Below you will find a stepped process for configuration the LX Photo Cell Active & Inactive Times (reference ***Figure 3.41 Photo Cell Active & Inactive Times***).

Figure 3.41 Photo Cell Active & Inactive Times

Step 1 – Review the current LX Motion Sensor Active & Inactive Settings. For a detailed description of the Active and Inactive time settings, see the similar section for Switch Stations in Section 3.2.2.

Step 2 – Once all settings have been entered in press the "Save" button to store these settings.

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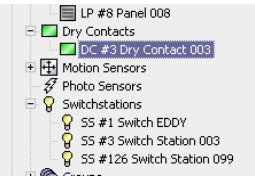
3.5 Dry Contact Input Module



The "Dry Contact" portion of the LX Interface is designed to allow for the individual configuration of each Dry Contact Module in the LX Lighting System. There will be a two-tabbed view that is displayed for each Dry Contact Module You can navigate between the subjects by clicking the corresponding tab. Configuration topics include:

- Switch Configuration – This tab is where the LX dry contact switches are configured.
- Active and Inactive Times – This tab is where the LX Dry Contact Module's active and inactive times are set.

Dry Contact Modules have have 1-6 switch inputs and each input is configured individually.

3.4.1 Dry Contact – Switch Configuration

The Switch Configurtaion tab is designed to provide a simple interface for setting up the designated configuration. Below you will find a stepped process for configuration of the dry contact inputs. By default Switch Input number one is selected (reference ***Figure 3.35 Configuring Photo Cell Inputs***).

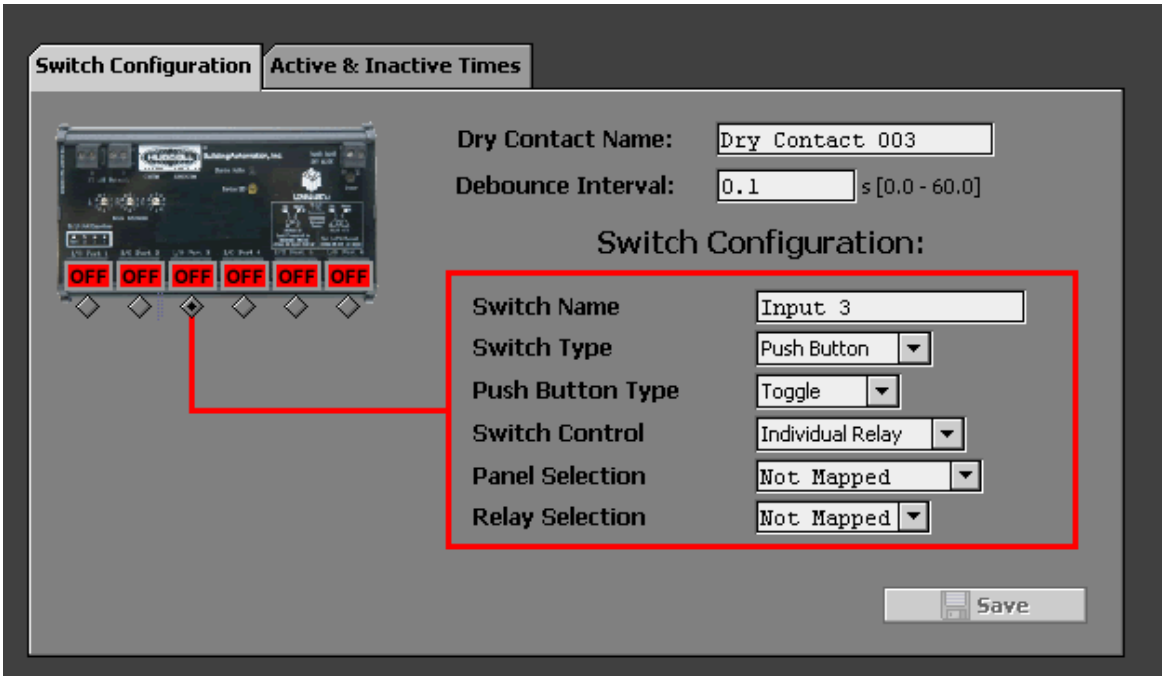


Figure 3.51 Dry Contact Input Module Configuration

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3.4.2 Dry Contact Input Module – Active & Inactive Times

The Active & Inactive Times tab is designed to provide a simple interface for setting up the designated Active & Inactive Times.

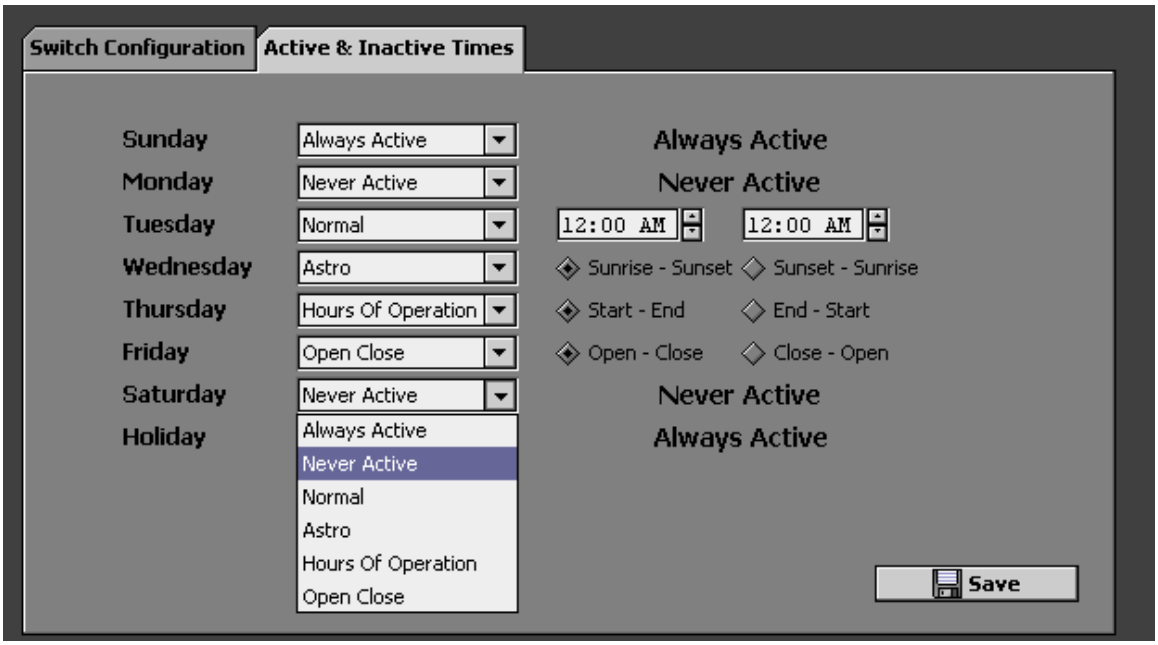

Figure 3.52 Dry Contract Input Module Active & Inactive Times

Step 1 – Review the current LX Motion Sensor Active & Inactive Settings. For a detailed description of the Active and Inactive time settings, see the similar section for Switch Stations in Section 3.2.2.

Step 2 – Once all settings have been entered in press the "Save" button to store these settings.

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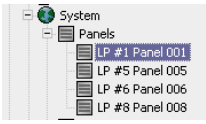
4 Relay Panels

4.1 Relay Panels – Panel Configuration



The Relay Panels" portion of the LX Interface is designed to allow for the individual configuration of each Relay Panel in the LX Lighting System. There will be a six tabbed view that is displayed for each Relay Panel. You can navigate between the subjects by clicking the corresponding tab. Configuration topics include:

1. Panel Status – This tab is designed to show the current relay status for each relay in the panel. This graphic is dynamic based upon the number of relays in the actual panel selected.
2. Edit Names – This tab is designed to edit the relay names in the selected relay panel. This graphic is dynamic based upon the number of relays in the actual panel selected.
3. Relay Types – This tab is designed to setup the type of relays. This graphic is dynamic based upon the number of relays in the actual panel selected.
4. After Hours – This tab is designed to setup relays to be included or excluded in the After Hours sweep. This graphic is dynamic based upon the number of relays in the actual panel selected.
5. Alarm Type – This tab is designed to setup relays to be either constant or pulsed alarm types. This graphic is dynamic based upon the number of relays in the actual panel selected.
6. Alarm Time – This tab is designed to setup relay Alarm Times. This graphic is dynamic based upon the number of relays in the actual panel selected.

The Relay Panels category contains all of the LX Relay Panels found on the network. Panels are named based upon their Node ID, which is set by the user settable dial switches. The user-settable dial switches determine each devices subnet/node combination. Each end device contains 3 address dial (0-9) switches allowing a number from 000-999 to be selected. The value 000 is reserved to place a device in LonMark mode. **Note in order for the LX JENE to operate correctly devices must not be placed in the LonMark mode.**

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4.1.1 Relay Panels – Panel Status

The Relay Panel Status tab is designed to provide a simple interface for viewing the current relay statuses of the LX Relay Panel. At any time all relays can be command on or off by pressing the appropriate button (reference ***Figure 4.1 Panel Status***).

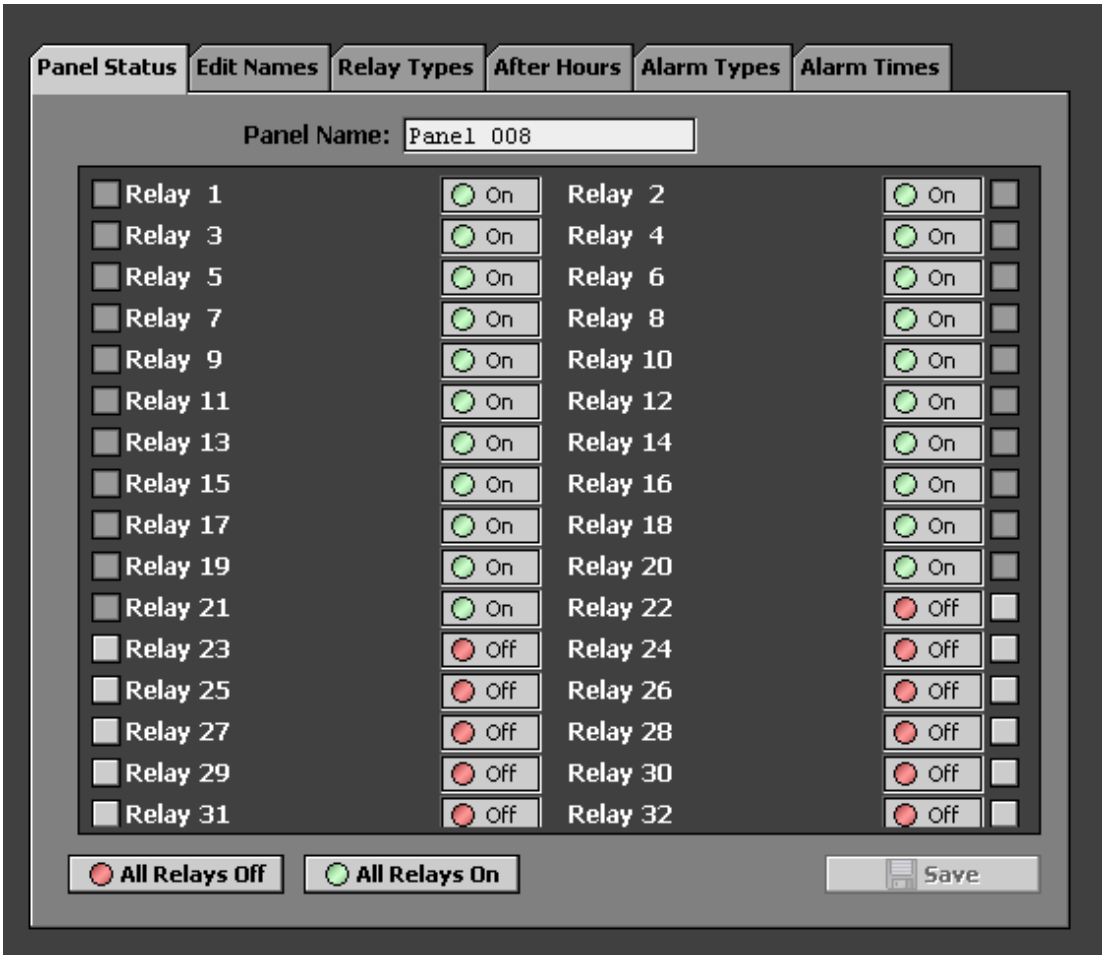

Figure 4.1 Panel Status

Step 1 – Review the current LX Relay Panel Name. If desired the Relay Panel Name can be changed at any time by typing the new name into the text box.

Step 2 – Once all settings have been entered in press the "Save" button to store these settings.

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4.1.2 Relay Panels – Edit Names

The Relay Panel Edit Names tab is designed to provide a simple interface for setting up the designated LX Relay Panels Relay Names. Below you will find a stepped process for configuring the LX Relay Panel Relay Names (reference ***Figure 4.3 Edit Relay Names***).

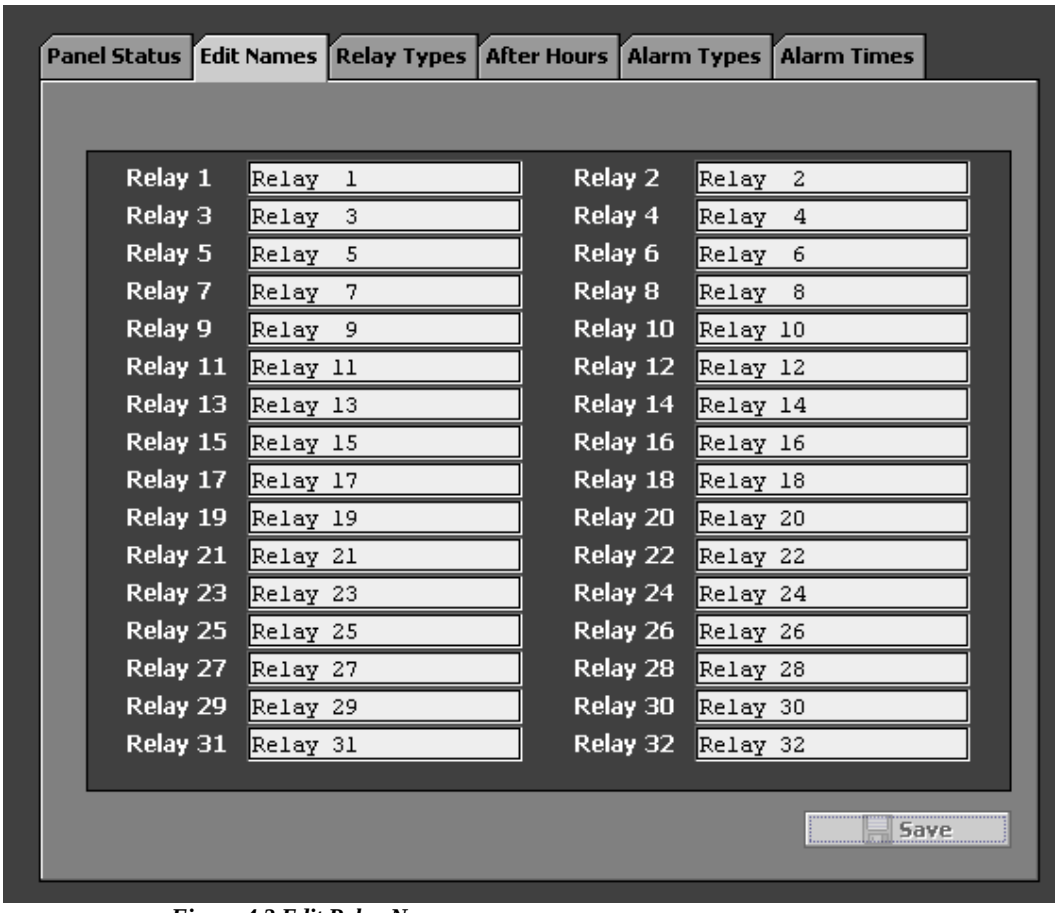

Figure 4.3 Edit Relay Names

Step #1 – Review the current LX Relay Panel Relay Names (reference ***Figure 4.4 Relay Names***). If desired the Relay Panel Relay Names can be changed at any time by typing the new name into the text box

Step 2 – Once the name is changes have been entered in press the "Save" button to store these settings.

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4.1.3 Relay Panels – Relay Types

The Relay Panel Relay Types tab is designed to provide a simple interface for setting up the designated LX Relay Panels Relay Types. Below you will find a stepped process for configuring the LX Relay Panel Relay Types (reference ***Figure 4.5 Edit Relay Types)***

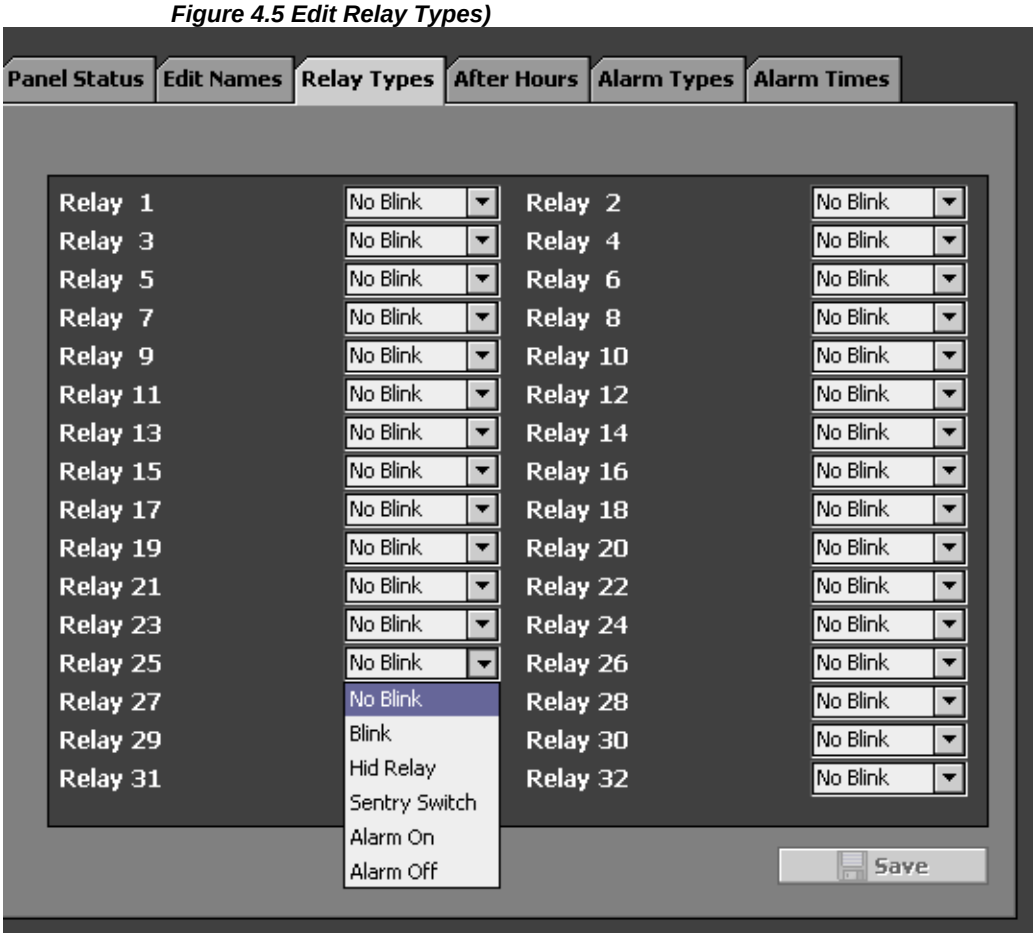

Figure 4.5 Edit Relay Types

Step 1 – Review the current LX Relay Panel Relay Types (reference ***Figure 4.6 Relay Types***). If desired the Relay Panel Relay Types can be changed at any time by selecting the new type from the drop down box.

1. No Blink – This option sets the selected relay to a No Blink state.
2. Blink – This option includes the relay in the Blink Alert.
3. HID Relay – This option configures the Relay as an HID Relay.
4. Sentry Switch – This option configures the Relay as a Sentry Switch.
5. Alarm On – This option sets the selected relay to an Alarm On state.
6. Alarm Off – This option sets the selected relay to an Alarm Off state.

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Figure 4.6 Relay Types

Step 2 – Once the relay types have been set press the "Save" button to store these settings.

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4.1.4 Relay Panels – After Hours

The Relay Panel After Hours tab is designed to provide a simple interface for setting up the designated LX Relay Panels After Hours settings. Below you will find a stepped process for configuring the LX Relay Panel After Hours settings (reference ***Figure 4.7 Edit Relay After Hours***).

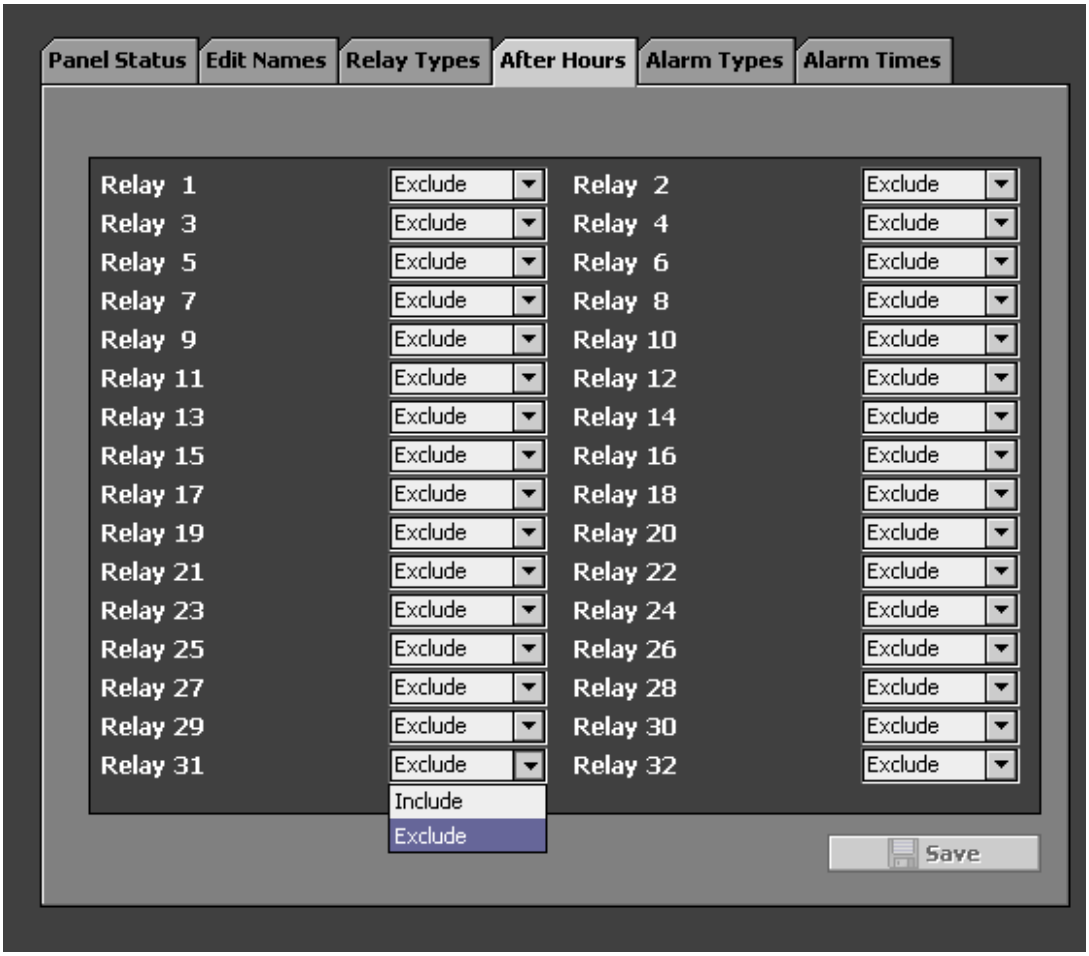

Figure 4.7 Edit Relay After Hours

Step 1 – Review the current LX Relay Panel Relay After Hours settings. If desired the Relay Panel Relay After Hours settings can be changed at any time by selecting the new selection from the drop down box.

1. Include – This option includes the relay in the After Hours Sweep.
2. Exclude – This option excludes the relay in the After Hours Sweep.
3.

Step 2 – Once the relay after hours settings have been set press the "Save" button to store these settings.

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4.1.5 Relay Panels – Alarm Type

The Relay Panel Alarm Type tab is designed to provide a simple interface for setting up the designated LX Relay Panels Alarm Type settings. Below you will find a stepped process for configuring the LX Relay Panel Alarm Type settings (reference ***Figure 4.9 Edit Relay Alarm Type***).

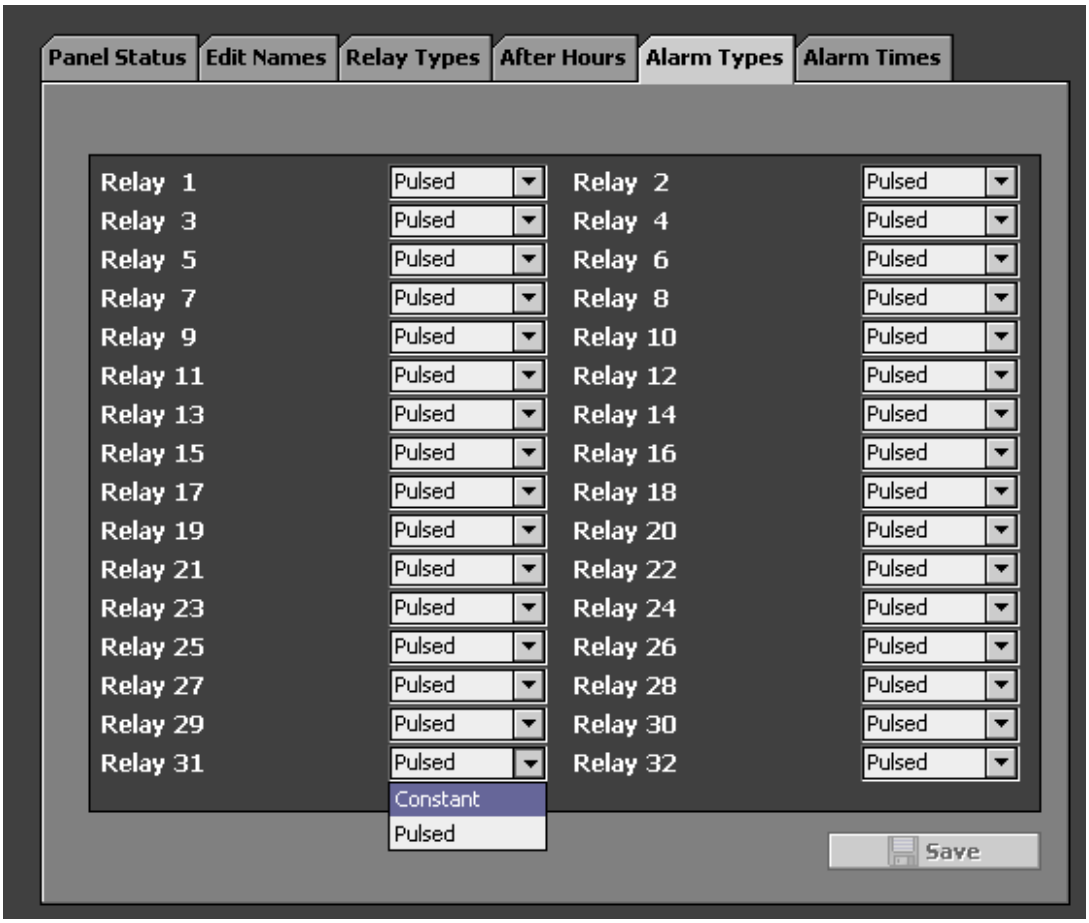

Figure 4.9 Edit Relay Alarm Type

Step 1 – Review the current LX Relay Panel Relay Alarm Type settings. If desired the Relay Panel Relay Alarm Type settings can be changed at any time by selecting the new selection from the drop down box.

1. Constant – This option sets the relay alarm type to constant. Note this only applies to relays that are set up for alarming.
2. Pulsed – This option sets the relay alarm type to pulsed. Note this only applies to relays that are set up for alarming.

Step 2 – Once the relay alarms type settings have been set press the "Save" button to store these settings.

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4.1.6 Relay Panels – Alarm Time

The Relay Panel Alarm Time tab is designed to provide a simple interface for setting up the designated LX Relay Panels Alarm Time settings. Below you will find a stepped process for configuring the LX Relay Panel Alarm Time settings (reference ***Figure 4.11 Edit Relay Alarm Time***).

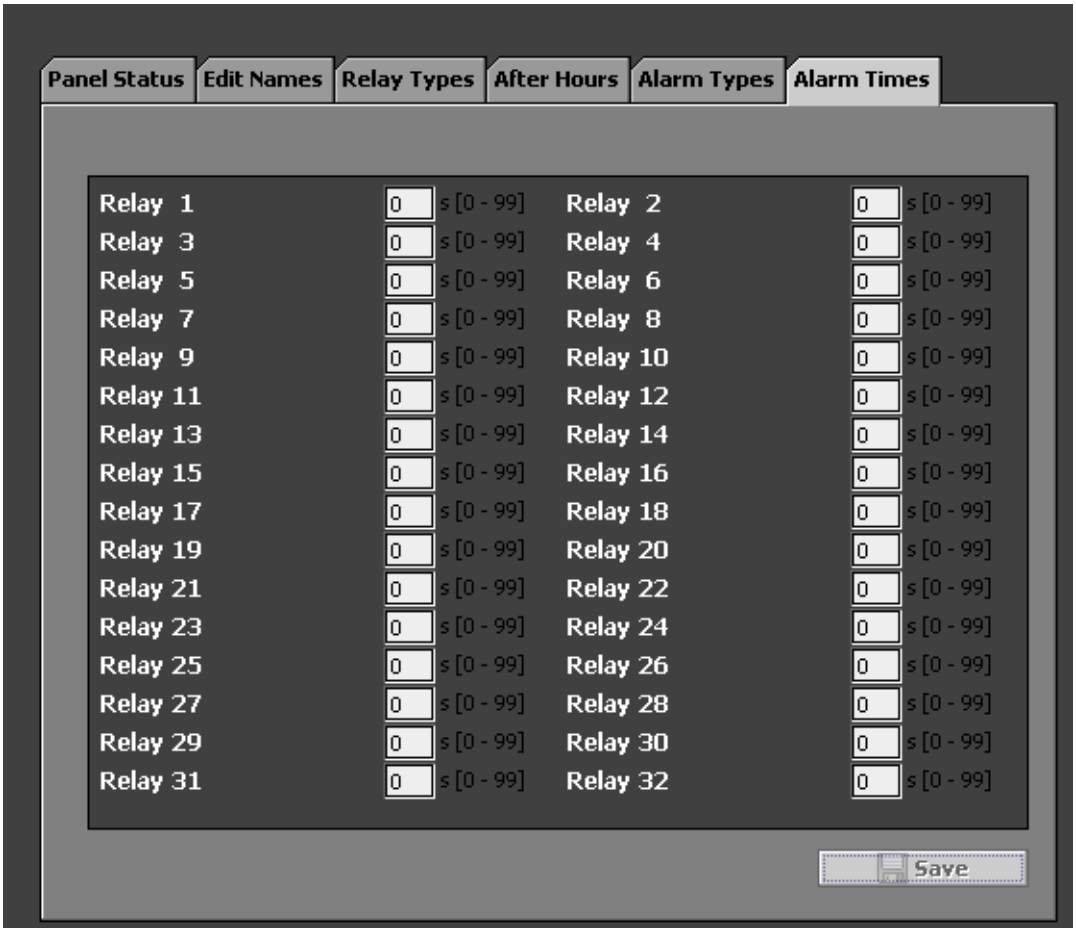
Panel Status
Edit Names
Relay Types
After Hours
Alarm Types
Alarm Times
Relay 1 0 s [0 - 99] Relay 2 0 s [0 - 99]
Relay 3 0 s [0 - 99] Relay 4 0 s [0 - 99]
Relay 5 0 s [0 - 99] Relay 6 0 s [0 - 99]
Relay 7 0 s [0 - 99] Relay 8 0 s [0 - 99]
Relay 9 0 s [0 - 99] Relay 10 0 s [0 - 99]
Relay 11 0 s [0 - 99] Relay 12 0 s [0 - 99]
Relay 13 0 s [0 - 99] Relay 14 0 s [0 - 99]
Relay 15 0 s [0 - 99] Relay 16 0 s [0 - 99]
Relay 17 0 s [0 - 99] Relay 18 0 s [0 - 99]
Relay 19 0 s [0 - 99] Relay 20 0 s [0 - 99]
Relay 21 0 s [0 - 99] Relay 22 0 s [0 - 99]
Relay 23 0 s [0 - 99] Relay 24 0 s [0 - 99]
Relay 25 0 s [0 - 99] Relay 26 0 s [0 - 99]
Relay 27 0 s [0 - 99] Relay 28 0 s [0 - 99]
Relay 29 0 s [0 - 99] Relay 30 0 s [0 - 99]
Relay 31 0 s [0 - 99] Relay 32 0 s [0 - 99]
Save

Figure 4.11 Edit Relay Alarm Time

Step 1 – Review the current LX Relay Panel Relay Alarm Time settings. If desired the Relay Panel Relay Alarm Time settings can be changed at any time by entering the new time in the text box..

Step 2 – Once the relay alarms time settings have been set press the "Save" button to store these settings.

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5 Extra Configuration Screens in the LX JENE

5.1 User Account Administation

The LX JENE comes with the capability to manage multiple password protected user accounts.

There are 4 primary user types in this hierarchy order. Each has authority to manage accounts with a lower priority.

hbaadmin: login has full access to all system functionality used for technical support and advanced commissioning settings.

sysadmin: short for system administrator, this is typically the commissioning agent or HBA representative.

siteadmin: short for site admistrator, this would normally be the local facilities manager responsible for overall operation of the system.

user: The system or site admistrator can setup password protected user accounts for employess to have limited access to the system. This user level has predefined access to only the programming section of the JENEsys. This level excludes access to configuration, integration, and other areas that are setup during commissioning.

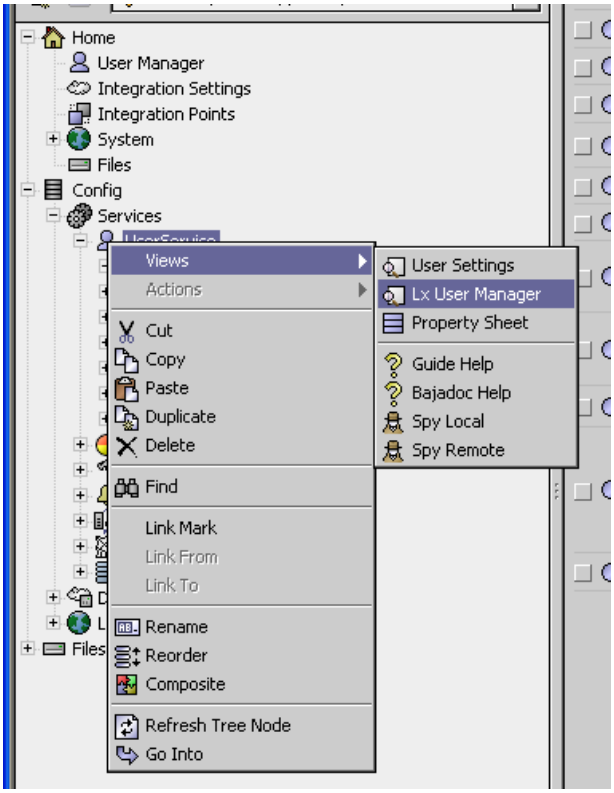

Figure 5.1.1 LX User Manager Selection

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To Set up a new user account.

Step 1 – Under the config folder, right click UserService and select Views. Then choose LX User Manager. (see figure 5.1.1)

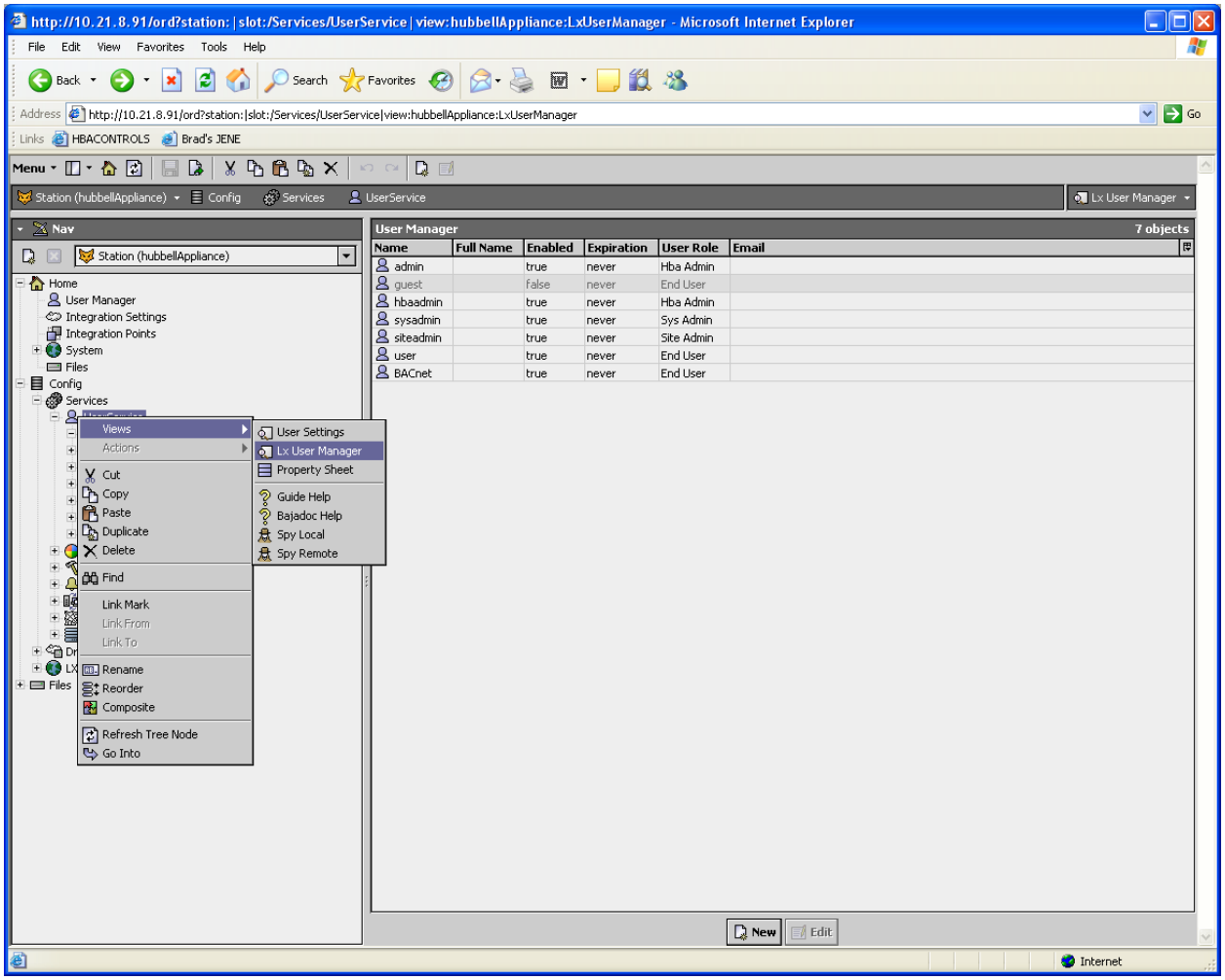

Figure 5.1.2 Setup a new user account.

Step 2 – From this screen (Figure 5.1.2) you can double click on a current user or select new from the bottom of the page to create a new user. The following dialog will open to choose the number of new users to add.

Figure 5.1.3 New User Add

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Step 3 – When a new user is created you can double click on the new name from the list to edit. The following settings are available as shown in figure 5.1.4

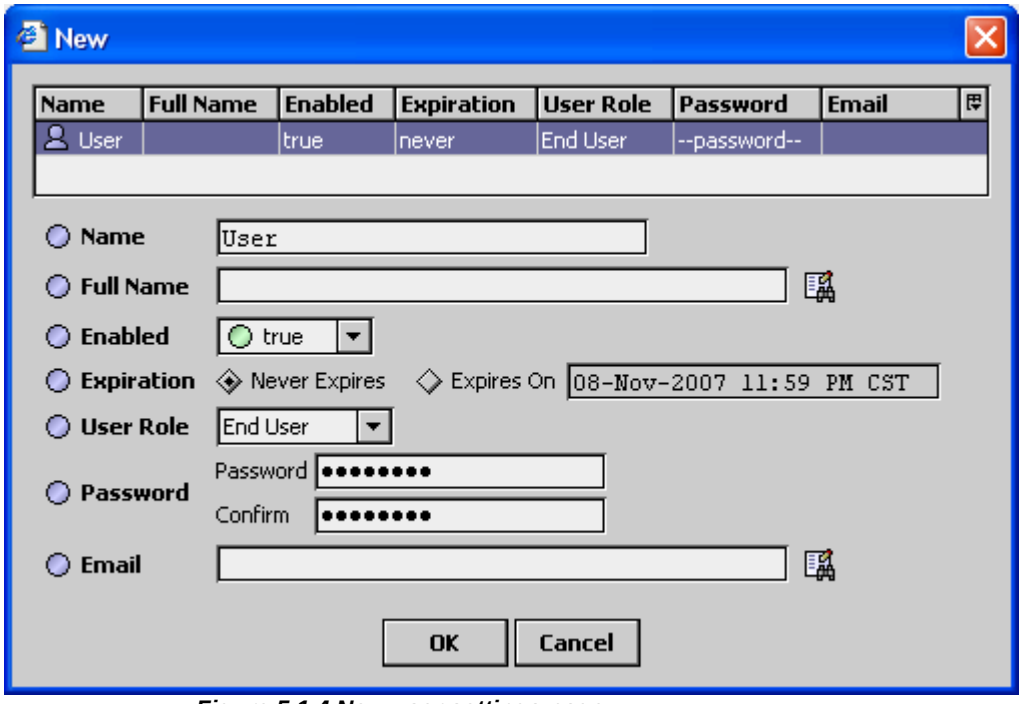

Figure 5.1.4 New user settings page

- **Name**: This is the login name for the account USER
- **Full Name**: The employees name for identification purposes.
- **Enabled**: True means the account is active, False will prevent log-in.
- **Expiration**: For temporary or contract workers, the term of the account can be set to expire or never expire.
- **User Role**: The User roles are predefined and allow access to various sections of the navigation tree.

  hbaadmin: login has full access to all system functionality used for technical support and advanced commissioning settings.

  sysadmin: short for system administrator, this is typically the commissioning agent or HBA representative.

  siteadmin: short for site admistrator, this would normally be the local facilities manager responsible for overall operation of the system.

  user: The system or site admistrator can setup password protected user accounts for employess to have limited access to the system. This user level has predefined access to only the programming section of the JENEsys. This level

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excludes access to configuration, integration, and other areas that are setup during commissioning.

- **Password**: The password is case sensitive.
- **E-mail**: There are options to send alarm information and status to users vial e-mail. Consult HBA technical support for more information.

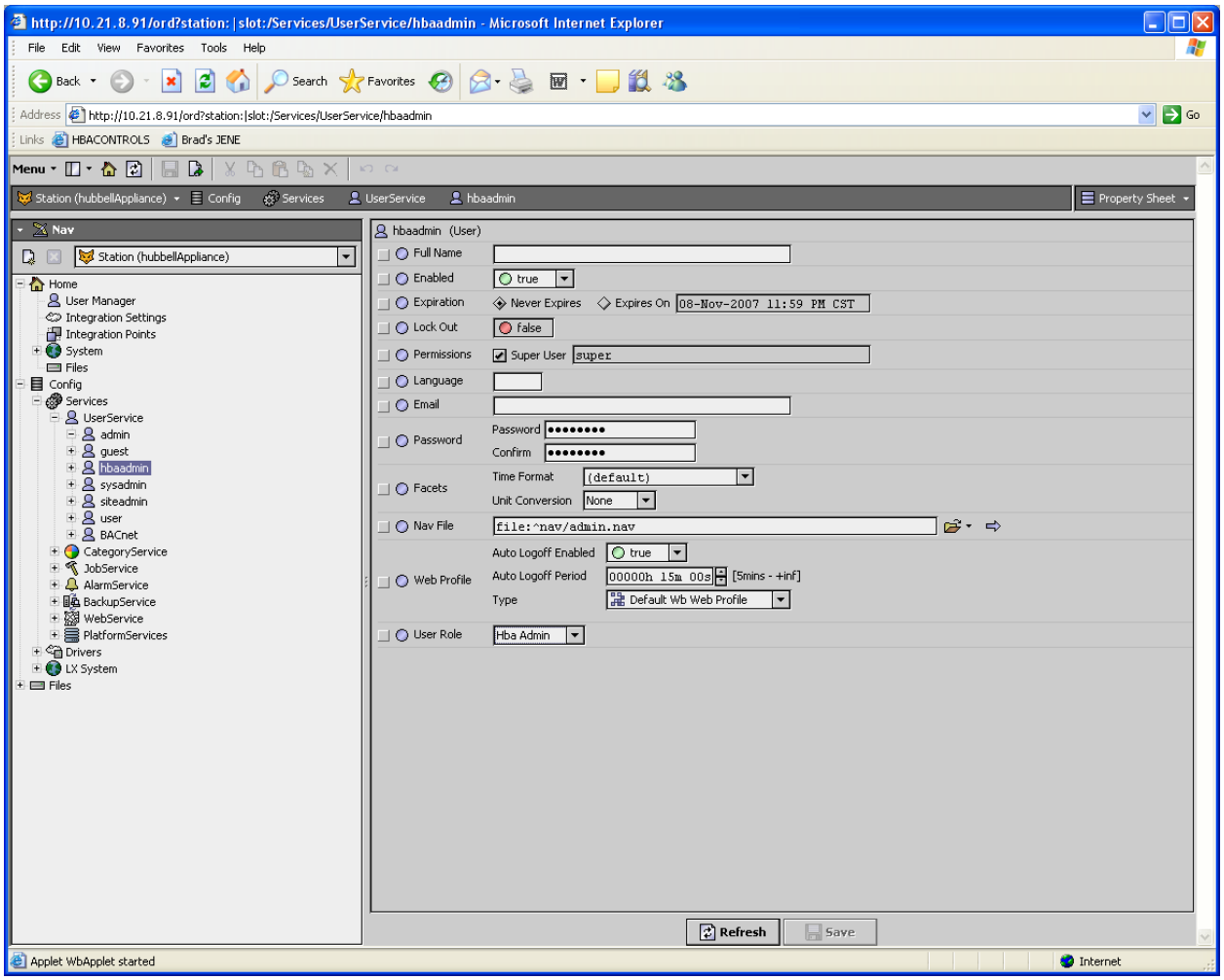

Figure 5.1.5 Detailed user account page

Step 4. Once a user is created, you can see their user name in the navigation tree on the right. Double clicking the user will open the details page as shown in Figure 5.1.5.

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5.2 TCP/IP Configuration in the LX System

The LX JENE comes with a built in TCP/IP Configuration screen. The LX JENE comes equipped with two Ethernet Connections. The first Ethernet connection is the primary interface while the second Ethernet connection can be used for BACnet IP communications.

There are certain instances that will require the changing of the LX JENE's IP Address. If connecting the LX JENE to either a company or Building Automation System's Ethernet backbone you will want to consult with the IT administrator of this given network and request TCPIP settings for each JENE on the network. When requesting these settings it is good practice to obtain a static IP address for each JENE. While the JENE does have the ability to use DHCP (Dynamic Host Configuration Protocol) this setup is not advised. DHCP automatically assigns the JENE an IP address, however since the IP address is not static it can change thus leaving you without the ability to connect to the LX JENE. As mentioned there are two primary instances when it is necessary to change the IP address of the LX JENE, they are:

1. When the JENE is going to reside on a LAN (Local Area Network) or a WAN (Wide Arean Network).
2. When the JENE is going to reside on a Building Automation System Ethernet network that is communicating over BACnet IP.

For details on configuration the TCPIP parameters reference ***Figure 5.2 TCP/IP Configuration***.

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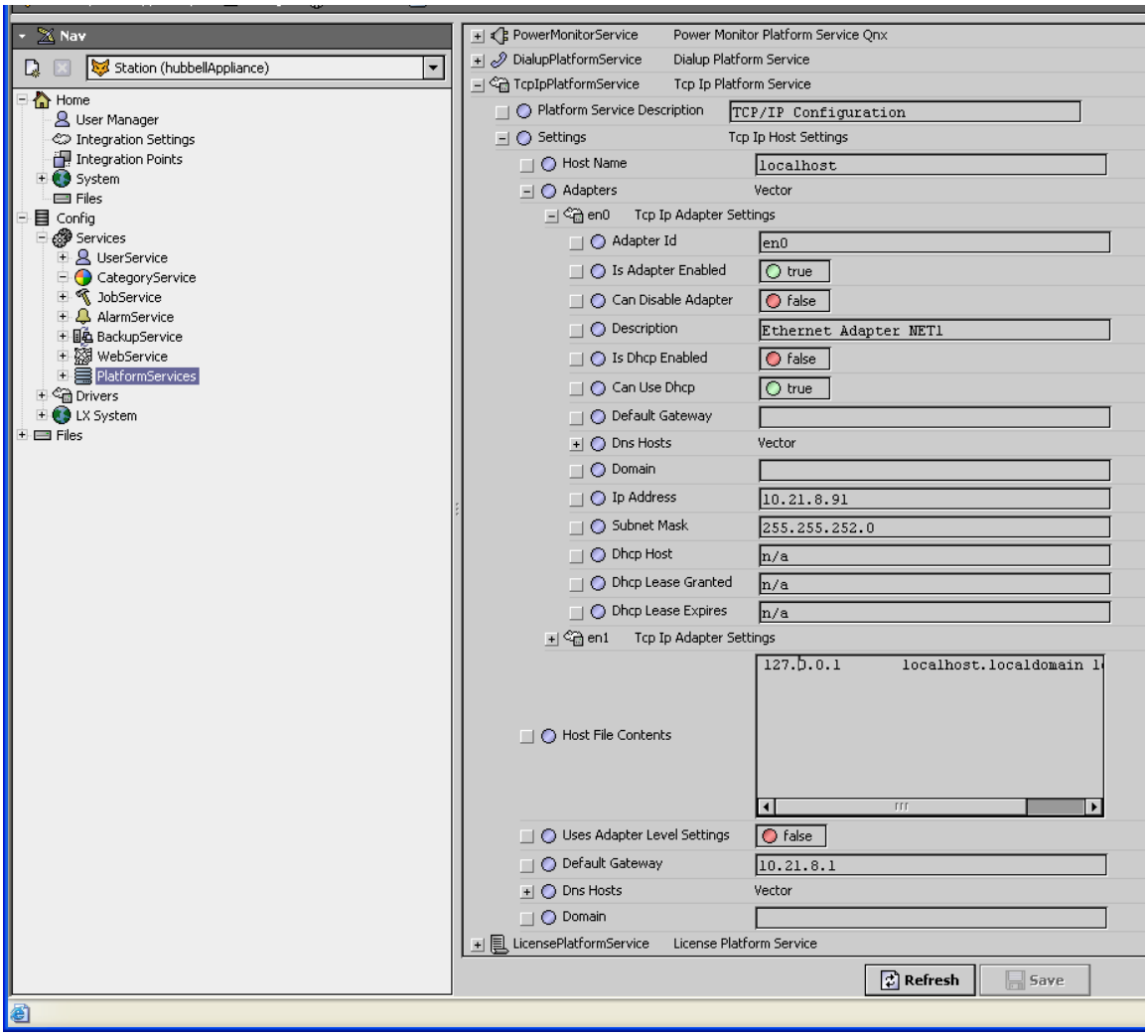

Figure 5.2 TCP/IP configurations

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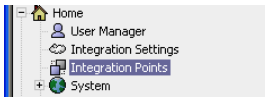
6 3rd Party BAS Integration

6.1 3rd Party BAS Integration – BACnet



If the LX JENE is ordered with either BACnet IP or BACnet MSTP communications option then the following configuration screens will be available. The configuration screens are designed to first build the BACnet Objects (points) based upon the actuall installed system and secondly provide customization of the communications settings. There are two main screens available, the first is found when double clicking on the "Integration Points" option in the Navigation Tree (reference ***Figure 6.1 BACnet Inegration Builder***). The remainder of this section discusses the Integration Builder.

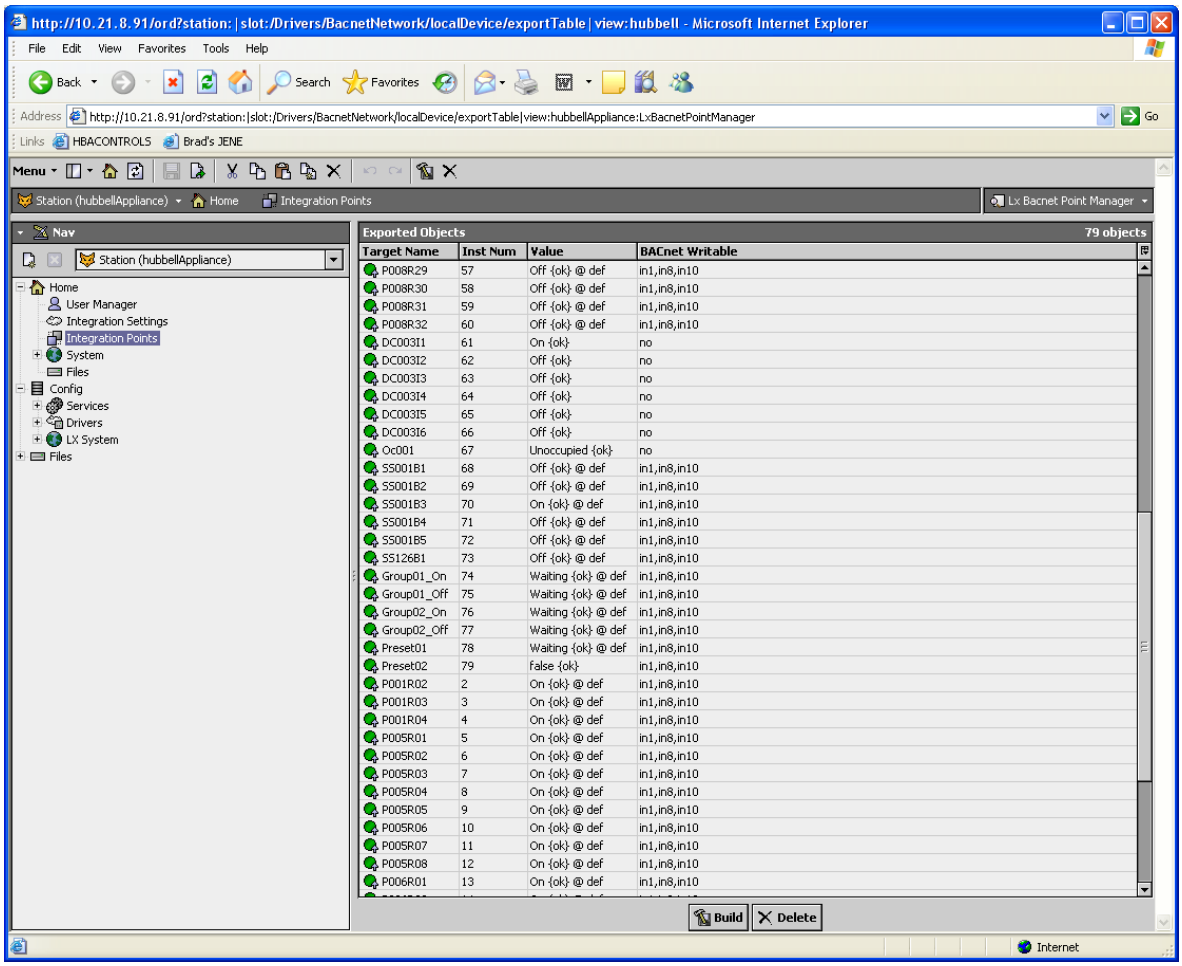

http://10.21.8.91/ord?station:|slot:/Drivers/BacnetNetwork/localDevice/exportTable|view:hubbell - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://10.21.8.91/ord?station:|slot:/Drivers/BacnetNetwork/localDevice/exportTable|view:hubbellAppliance:LxBacnetPointManager
Go
Links HBACONTROLS Brad's JENE
Menu
Station (hubbellAppliance) Home Integration Points
Lx Bacnet Point Manager
Nav
Station (hubbellAppliance)
Home
User Manager
Integration Settings
Integration Points
System
Files
Config
Services
Drivers
LX System
Files
Exported Objects
79 objects
Target Name | Inst Num | Value | BACnet Writable
P008R29 57 Off {ok} @ def in1,in8,in10
P008R30 58 Off {ok} @ def in1,in8,in10
P008R31 59 Off {ok} @ def in1,in8,in10
P008R32 60 Off {ok} @ def in1,in8,in10
DC003I1 61 On {ok} no
DC003I2 62 Off {ok} no
DC003I3 63 Off {ok} no
DC003I4 64 Off {ok} no
DC003I5 65 Off {ok} no
DC003I6 66 Off {ok} no
Oc001 67 Unoccupied {ok} no
SS001B1 68 Off {ok} @ def in1,in8,in10
SS001B2 69 Off {ok} @ def in1,in8,in10
SS001B3 70 On {ok} @ def in1,in8,in10
SS001B4 71 Off {ok} @ def in1,in8,in10
SS001B5 72 Off {ok} @ def in1,in8,in10
SS126B1 73 Off {ok} @ def in1,in8,in10
Group01_On 74 Waiting {ok} @ def in1,in8,in10
Group01_Off 75 Waiting {ok} @ def in1,in8,in10
Group02_On 76 Waiting {ok} @ def in1,in8,in10
Group02_Off 77 Waiting {ok} @ def in1,in8,in10
Preset01 78 Waiting {ok} @ def in1,in8,in10
Preset02 79 false {ok} in1,in8,in10
P001R02 2 On {ok} @ def in1,in8,in10
P001R03 3 On {ok} @ def in1,in8,in10
P001R04 4 On {ok} @ def in1,in8,in10
P005R01 5 On {ok} @ def in1,in8,in10
P005R02 6 On {ok} @ def in1,in8,in10
P005R03 7 On {ok} @ def in1,in8,in10
P005R04 8 On {ok} @ def in1,in8,in10
P005R05 9 On {ok} @ def in1,in8,in10
P005R06 10 On {ok} @ def in1,in8,in10
P005R07 11 On {ok} @ def in1,in8,in10
P005R08 12 On {ok} @ def in1,in8,in10
P006R01 13 On {ok} @ def in1,in8,in10
Build
Delete
Internet

Figure 6.1 BACnet Integration Builder

The actual creation of all of the BACnet Objects for the LX Lighting System is very simple. Once you have validated that all LX devices on the network are successfully integrated into the LX JENE the only step required is to push the

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"Build" button. The LX JENE then queiries the database and determines what devices are installed and creates the appropriate BACnet objects.
To download the list of Bacnet Objects, right click on the export icon in the upper right hand corner of the page as shown below in figure 6.2. You can then choose the file type and viewing method as shown in figure 6.3.

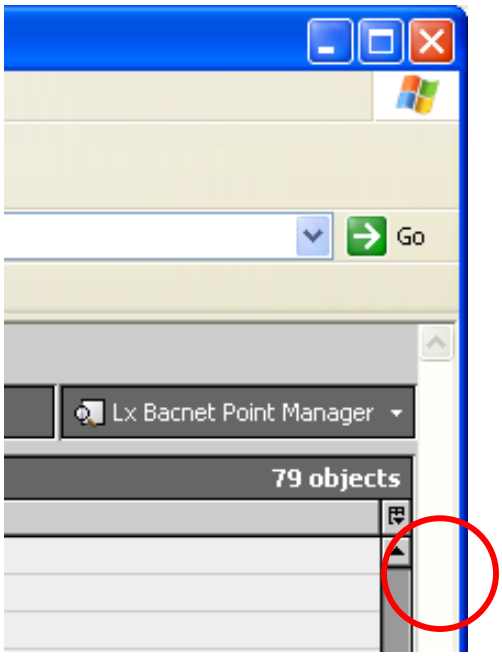

Figure 6.2 BACnet Export File Button

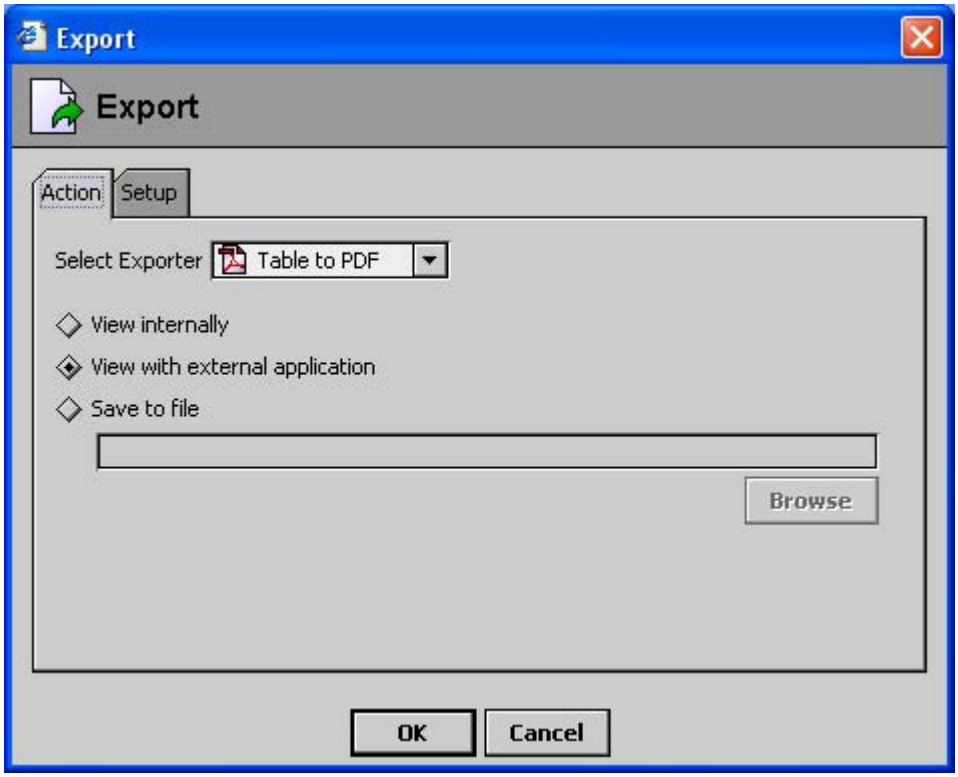

Figure 6.4 BACnet Integration Builder

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Double clicking on any of the BACnet object will open up a properties sheet for editing (figure 6.2).

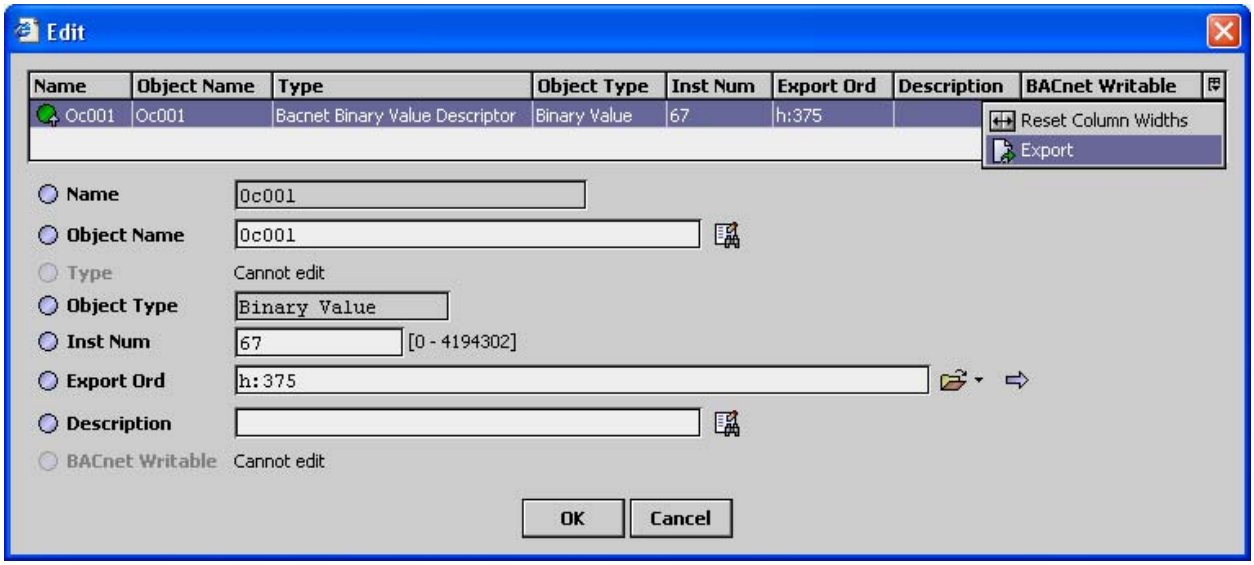

Figure 6.3 BACnet Integration Builder

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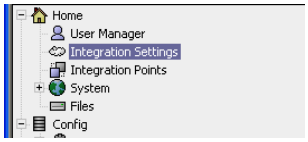
6.1.1 BACnet – IP Settings



If the LX JENE is ordered with BACnet IP communications then there are specific settings that need to be setup for proper operation. Coordination with the Building Automation System contractor is required for proper configuration of the BACnet IP Settings (reference ***Figure 6.8 BACnet IP Settings***). Below are details of all configurable settings for BACnet IP.

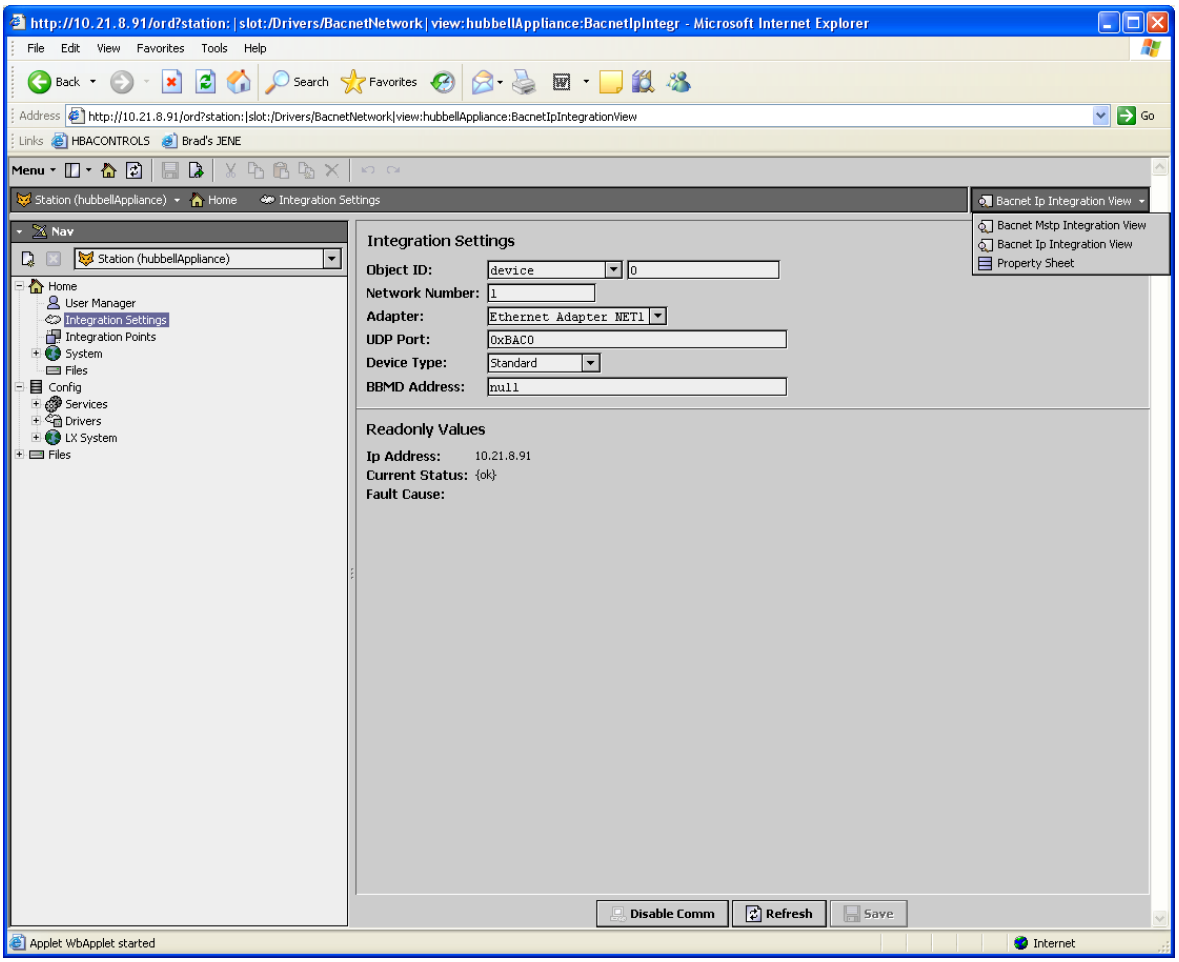


Figure 6.8 BACnet IP Settings

Object ID – Each BACnet device on the network requires a unique Object ID. This is numeric value that the BAS contractor needs to identify.

Network Number – Each BACnet network can have several sub-networks, which are identified by the Network Number. By default the Network Number will be set to 1, but should be changed to reflect the proper Network Number. This is numeric value that the BAS contractor needs to identify. **Note if this value is a -1 then the driver will not enable, this value must be a positive number for proper operation**.

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Ethernet Adapter – The JENE has two Ethernet Ports available for communicating BACnet IP. Either port is fine for use, however if the second port is chosen then this port must be enabled in the JENE's TCPIP configuration reference Section **5.2 TCPIP Configuration in the LX System**. **Note if none is selected then BACnet IP communications will not work**.

Figure 6.9 BACnet IP Ethernet Adapter

UDP Port – By default, the "conventional" UDP port 0xBAC0 (decimal 47808) is used, however, you can specify using another UDP port. If another UDP Port is required then the BAS Contractor should determine this value.

Device Type – By default, the device type is set to standard (reference ***Figure 6.10 BACnet IP Device Type***). The Device Type allows for operation as a BBMD (BACnet Broadcast Management Device) or BACnet Foreign Device, or a standard BACnet device (the default). Remaining properties support further configuration as a BBMD or Foreign Device. If another Device Type other than standard is required then the BAS Contractor should determine this value.

Figure 6.10 BACnet IP Device Type

BBMD Address – if the LX JENE is configured as a BBMD device type then the BAS Contractor must specify this value.

Note once all settings have been properly configured then the "Save" button must be pressed. In addition pressing the "Enable Communications" button should enable BACnet communications. At any time pressing the "Disable Communications" button can disable communications.

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